



**Interim Response Action
Basin F Liquid Incineration Project**

**FINAL DRAFT
HUMAN HEALTH
RISK ASSESSMENT
ASSOCIATED WITH HYDRAZINE
RINSEWATER INCINERATION
(APPENDIX TO VOLUME I)**

Volume III

**Preplaced Remedial Action Contract
Contract No. DACW-45-90-D-0015**

July 1991

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U.S. Army Corps
of Engineers
Omaha District

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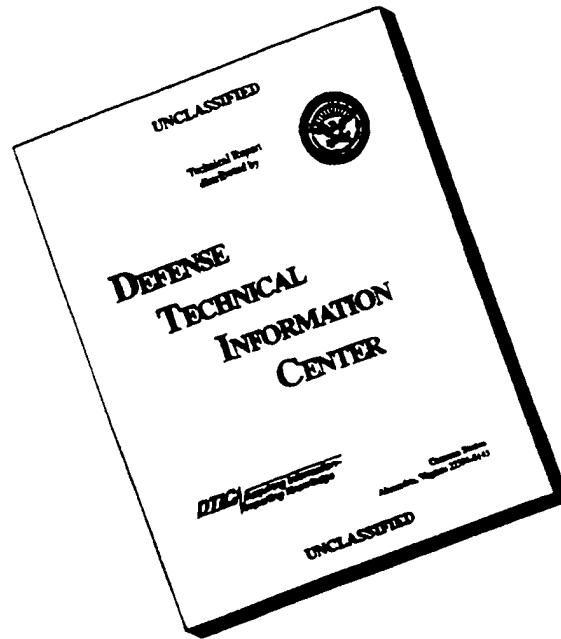
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13. ABSTRACT (Maximum 200 words) THIS DOCUMENT IS A COMPREHENSIVE, MULTIPLE EXPOSURE PATHWAY, HUMAN HEALTH RISK ASSESSMENT PREPARED FOR THE PROPOSED BASIN F LIQUID INCINERATION PROJECT. THE SUBMERGED QUENCH INCINERATOR WILL TREAT BASIN F LIQUID AND HYDRAZINE RINSE WATER. THE OBJECTIVE OF THE RISK ASSESSMENT IS TO ESTABLISH CHEMICAL EMISSION LIMITS WHICH ARE PROTECTIVE OF HUMAN HEALTH. AVERAGE AND MAXIMUM LIFETIME DAILY INTAKES WERE CALCULATED FOR ADULTS, CHILDREN, AND INFANTS IN FOUR MAXIMUM EXPOSURE SCENARIOS UNDER BASE CASE AND SENSITIVITY CASE EMISSIONS CONDITION. IT WAS CONCLUDED THAT THE INCINERATION FACILITY POSES NEITHER CARCINOGENIC NOR NONCARCINOGENIC RISK TO ANY SENSITIVE POPULATION. THE ASSESSMENT IS DIVIDED INTO THE FOLLOWING SECTIONS: 1. INCINERATION FACILITY DESCRIPTION 2. DESCRIPTION OF SURROUNDING AREA 3. PROCESS OF POLLUTANT IDENTIFICATION AND SELECTION 4. DETERMINATION OF EMISSION RATES FROM INCINERATION FACILITY					
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**PROGRAM MANAGER FOR
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO**

**INTERIM RESPONSE ACTION
BASIN F LIQUID INCINERATION PROJECT**

**FINAL DRAFT
HUMAN HEALTH RISK ASSESSMENT
ASSOCIATED WITH HYDRAZINE RINSEWATER INCINERATION**

**VOLUME III
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**VOLUME III
TABLE OF CONTENTS**

<u>Section</u>	<u>Title</u>	<u>Page</u>
1	INTRODUCTION	1-1
2	SELECTION OF KEY PATHWAYS AND POLLUTANTS	2-1
	2.1 Introduction	2-1
	2.2 Air Pathway	2-1
	2.3 Soil Pathway	2-1
	2.4 Surface Water Pathway	2-2
3	ESTIMATION OF EMISSION RATES	3-1
4	AIR QUALITY AND DEPOSITION MODELING ANALYSIS	4-1
	4.1 Introduction	4-1
5	EXPOSURE ASSESSMENT	5-1
	5.1 Introduction	5-1
6	TOXICITY ASSESSMENT	6-1
	6.1 Introduction	6-1
	6.2 Cancer Slope Factors	6-1
	6.3 Reference Doses for Noncarcinogenic Effects	6-1
7	RISK CHARACTERIZATION AND DISCUSSION	7-1
	7.1 Introduction	7-1
	7.2 Risk Results	7-1
	7.2.1 Carcinogenic Risks	7-1
	7.2.2 Noncarcinogenic Effects	7-5
	7.3 Conclusions	7-5
8	CITED REFERENCES	8-1

**VOLUME III
TABLE OF CONTENTS
(continued)**

<u>Section</u>	<u>Title</u>	<u>Page</u>
9	SUPPORTING DOCUMENTATION	9-1
9.1	Resident A Scenario	9-2
9.1.1	Base Case Emissions	9-3
9.1.2	Sensitivity Case Emissions	9-4
9.2	Resident B Scenario	9-5
9.2.1	Base Case Emissions	9-6
9.2.2	Sensitivity Case Emissions	9-7
9.3	Farmer Scenario	9-8
9.3.1	Base Case Emissions	9-9
9.3.2	Sensitivity Case Emissions	9-10
9.4	Worker Scenario	9-11
9.4.1	Base Case Emissions	9-12
9.4.2	Sensitivity Case Emissions	9-13
9.5	Hydrazine Wastestream and Emission Documentation	9-14

VOLUME III **LIST OF TABLES**

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
2-1	Composition of Hydrazine Rinsewater in Tanks and Sump; Chemical & Physical Characteristics	2-3
2-2	Composition of Hydrazine Rinsewater in Tanks and Sump; Additional Chemical & Physical Characteristics	2-5
2-3	Selection of Contaminants of Potential Concern for the Hydrazine Rinsewater	2-7
2-4	Tier 1 Surface Water Pathway Screening Analysis for Hydrazine Rinsewater	2-8
3-1	Organic Emission Rates from Incineration of Rocky Mountain Arsenal Hydrazine Rinsewater (Principal Organic Hazardous Constituents)	3-2
3-2	Organic Emission Rates from Incineration of Rocky Mountain Arsenal Hydrazine Rinsewater (Products of Incomplete Combustion)	3-4
3-3	Incremental Metals Emission Rates for Rocky Mountain Arsenal Hydrazine Rinsewater	3-7
6-1	Slope Factors for Carcinogens [(mg/kg/day) ⁻¹] in Hydrazine Rinsewater	6-2
6-2	Reference Doses for Noncarcinogens (mg/kg/day) in Hydrazine Rinsewater	6-3
7-1	Total Lifetime Carcinogenic Risk for Hydrazine Rinsewater and Basin F Liquid - Rocky Mountain Arsenal for Four Exposure Scenarios	7-2
7-2	Total Hazard Index for Hydrazine Rinsewater and Basin F Liquid - Rocky Mountain Arsenal for Four Exposure Scenarios	7-3
7-3	Comparison of Predicted Soil and Air Levels of Lead to Soil Cleanup and National Ambient Air Quality Standards (NAAQS)	7-9

**VOLUME III
LIST OF FIGURES**

<u>Figure No.</u>	<u>Title</u>	<u>Page</u>
7-1	Additive Total Lifetime Carcinogenic Risks for Resident, Farmer, and On-Site Worker Exposure Scenarios for Hydrazine Rinsewater and Basin F Liquid Waste Combined	7-4
7-2	Additive Total Hazard Indices for Resident, Farmer, and On-Site Worker Exposure Scenarios for Hydrazine Rinsewater and Basin F Liquid Waste Combined Under Base Case Emissions	7-6
7-3	Additive Total Hazard Indices for Resident, Farmer, and On-Site Worker Exposure Scenarios for Hydrazine Rinsewater and Basin F Liquid Waste Combined Under Sensitivity Case Emissions	7-7

SECTION 1

INTRODUCTION

This is a supplementary report to the Final Draft Human Health Risk Assessment, Volumes I and II, prepared by Roy F. Weston, Inc. (WESTON, 1991) which presented the risks associated with the Basin F Liquid Submerged Quench Incineration Project for Rocky Mountain Arsenal (RMA) located in Denver, CO. The purpose of this supplementary report (Volume III, WESTON, 1991) is to evaluate the human health risks associated with the incineration of hydrazine rinsewater by the Submerged Quench Incineration (SQI) unit, and to determine whether the addition of the hydrazine rinsewater to the Basin F liquid wastes will pose an increased risk over that previously determined for Basin F Liquid waste (WESTON, 1991).

The primary objective of the human health risk assessment conducted by Roy F. Weston, Inc. (WESTON) for RMA was to assist in the establishment of chemical emission limits for the Basin F Liquid Incineration Project, while staying as close as possible to the approach described in the EPA Risk Assessment Guidance for Superfund -- Human Health Evaluation Manual, Part A (RAGS) (EPA, 1989a). The following points must be made to clarify that incinerator risk assessments differ significantly from Superfund risk assessments:

- Superfund risk assessments use actual contaminant data from analytical chemistry evaluations of air, soil, and water to assess potential human exposures at a site.
- Incinerator risk assessments, on the other hand, must use predicted human exposures from modeling rather than measured exposures [the objective of the risk assessment is to evaluate whether the incinerator should be built (i.e., in general, there is no incinerator from which to gather data)].

Therefore, in an attempt to utilize Superfund terminology, WESTON had to redefine the term "Reasonable Maximum Exposure" (RME). RAGS defines RME as the upper 95% Confidence Limit of the arithmetic mean of the exposure data determined from analytical

chemistry evaluations of samples collected from air, water, or soil. The available data did not support the calculation of an upper 95% confidence interval for the emissions because of an insufficient number of data points. The numbers of actual concern, the human exposures at various points in the community surrounding the incinerator, can only be modeled from the initial waste stream sample data and subsequent predicted emissions. Section 1 of Volume I of this report should be reviewed for a detailed discussion of the methods used to predict emissions.

The methodologies and assumptions employed for air dispersion and deposition modeling and the risk assessment process (exposure assessment, toxicity assessment, risk characterization) are identical to those discussed in Volume I of the Final Draft Report (WESTON, 1991). Therefore, appropriate sections of the Final Draft Report, Volume I, are cited where necessary. The methodology employed for determination of hydrazine rinsewater emission rates differs in a few respects from that used for Basin F liquid; this is discussed in Section 3 of this report.

The risk results presented in Section 7 of this report are calculated on the basis of incinerating the hydrazine rinsewater as a separate rinsewater unit. For comparison purposes, a summary of the risks calculated for the Basin F Liquid is presented in the summary tables of the hydrazine rinsewater risk results. The physical addition of the hydrazine rinsewater to the Basin F liquid will not alter total chemical emissions characteristics or operational properties of the incinerator, since hydrazine rinsewater only represents 2.7% of the total volume of Basin F liquid. Furthermore, it will not alter air modeling isopleths originally employed in the Basin F liquid study. As indicated in Subsections 8.3.2 and 8.3.3 of the Risk Assessment Guidance for Superfund Human Health Evaluation Manual (EPA,1989a), the risk results are assumed to be additive to those calculated for the incineration of the Basin F liquid. It should be noted that a number of chemical entities present in the hydrazine rinsewater are identical to many found in the

Basin F liquid. However, the entire mass of hydrazine waste has been evaluated in this supplemental risk assessment, independent of the Basin F liquid.

SECTION 2

SELECTION OF KEY PATHWAYS AND POLLUTANTS

2.1 INTRODUCTION

The physical and chemical characteristics of the hydrazine rinsewater are summarized in Tables 2-1 and 2-2. The values presented were used in the final selection of contaminants of concern as described later in this section. The purpose of this evaluation was to eliminate those chemicals that would not be of significance in the risk characterization. The final selection was based on various conservative criteria discussed in Section 4 of Volume I of the Final Draft Human Health Risk Assessment (WESTON, 1991).

The process used for the determination of key pathways and pollutant selection was identical to that described in Section 7 of Volume I of the Final Draft Human Health Risk Assessment (WESTON, 1991).

2.2 AIR PATHWAY

The pollutants selected for the inhalation pathway are the same for all scenarios discussed in Section 8 of Volume I of the Final Draft Human Health Risk Assessment (WESTON, 1991). The rationale for this approach is also outlined in Subsection 7.3 of Volume I. A list of the pollutants of concern in the hydrazine rinsewater for this pathway is found in Table 2-3.

2.3 SOIL PATHWAY

All pollutants were screened through the soil pathway based on those criteria presented in Subsection 7.4 of Volume I of the Final Draft Human Health Risk Assessment (WESTON, 1991). All volatile organic compounds (VOCs) were excluded from the soil pathway. The

Table 2-1
Rocky Mountain Arsenal
Composition of Hydrazine Rinsewater in Tanks & Sump
Chemical & Physical Characteristics

Compounds	Appropriate Synonym	CAS #	Vapor Pressure (mm Hg)	Ref	Henry's Constant (atm-m ³ /m)	Ref	Log K _{ow}	Ref	BCF	Ref
Aniline	Benzenamine	62-53-3	0.489 (25°C)	Howard 1989	1.36E-01	Howard 1989	0.90	Howard 1989	6.03 ¹ (calc)	Howard 1989
Benzothiazole	NA	95-16-9	NA	NA	NA		2.01	ATSDR 1989a	19.8 ¹ (calc)	ATSDR 1990a
Bis(2-Ethylhexyl) phthalate	DEHP, Dioctyl- Phthalate Di(2- ethylhexyl) phthalate	117-81-7	2E-07 (20°C)	EPA 1987	3E-07	EPA 1987	8.73	EPA 1987	850	ATSDR 1990a
4-Chloroaniline	NA	106-47-8	0.025 (25°C)	Howard 1989	1.07E-05 (calc)	Howard 1989	1.83	Howard 1989	14.5 ¹ (calc)	ATSDR 1990a
Chloroethane	Ethyl Chloride	75-00-3	1000	EPA 1987	1.48E-01	EPA 1987	1.49	EPA 1987	2-9 ¹ (calc)	Howard 1989
1,1- Dichloroethane	Ethylidene Chloride Ethylidene Dichloride	75-34-3	182	EPA 1986b	4.31E-03	EPA 1986b	1.79	EPA 1986b	1.2	Howard 1989
1,2- Dichloroethane	Ethylene Dichloride	107-06-2	64	EPA 1986b	9.78E-04	EPA 1986b	1.48	EPA 1986b	2	EPA 1987
1,2- Dichloropropane	Propylene Chloride	78-875	42	EPA 1987	2.31E-03	EPA 1987	2.00	EPA 1987	NA	NA
Dimethyl disulfide	Methyl Sulfide	75-18-3	NA	NA	NA	NA	1.77	ATSDR 1990b	13 ¹ (calc)	ATSDR 1990a

Table 2-1
(continued)

Compounds	Appropriate Synonym	CAS #	Vapor Pressure (mm Hg)	Ref	Henry's Constant (atm-m ³ /m)	Ref	Log Kow	Ref	BCF	Ref
Hydrazine	NA	302-01-2	14	EPA 1986b	1.73E-09	EPA 1986b	-3.08	EPA 1986b	2.8 ¹ (calc)	ATSDR 1990a
Lindane	Hexachlorocyclo- hexane (gamma)	58-89-9	4.0E-06 (20°C)	ATSDR 1989b	7.8E-06	ATSDR 1989b	3.3	ATSDR 1989b	130	EPA 1986b
Methyl Ethyl Ketone	2-Butanone	78-93-3	77.5	EPA 1986b	2.74E-05	EPA 1986b	0.26	EPA 1986b	0	EPA 1986b
Methylphenol	4-Cresol,p-Cresol	106-44-5	0.13 (25°C)	Howard 1989	9.6E-07	Howard 1989	1.94	Howard 1989	18 ¹ (calc)	Howard 1989
Monomethyl hydrazine	Methylhydrazine	60-34-4	49.6	Clayton 1981	NA	NA	-3.08	EPA 1986b	2.8 ¹ (calc)	ATSDR 1990a
Naphthalene	Naphthene	91-20-3	0.23	EPA 1987	1.15E-03	EPA 1987	3.35	EPA 1987	430	ATSDR 1990a
Naphthalene carbonitrile (based on Naphthalene)	1-Naphthalene carbonitrile	86-53-3	NA	NA	NA	NA	3.35	EPA 1987	430	ATSDR 1990a
N-Nitrosodi- methylamine	Dimethyl- nitrosamine	62-75-9	8.1 (25°C)	EPA 1987	3.3E-05	EPA 1987	-0.68	EPA 1986b	0	EPA 1986b
Unsymmetrical dimethyl hydrazine	1,1- Dimethylhydrazine	57-14-7	156	Clayton 1981	1.00E-07	EPA 1986b	-2.42	EPA 1986b	2.8 ¹ (calc)	ATSDR 1990a
Vinyl Acetate	1-Acetoxyethylene acetic acid	108-05-4	85 (20°C)	Howard 1989	4.81E-04	Howard 1989	0.73	Howard 1989	2.53 ¹ (calc)	ATSDR 1990a

¹ All calculated BCFs were based on Lyman, et. al. 1982.

Equation: $\log BCF = 0.76 (\log Kow) - 0.23$

If a Kow for a particular chemical was below input range (7.9) and no other alternative existed for deriving a BCF, 7.9 was used to derive a conservative estimate of the BCF.

NA - Not available.

Table 2-2
Rocky Mountain Arsenal
Composition of Hydrazine Rinsewater in Tanks & Sump
Additional Chemical & Physical Characteristics

Compounds ($\mu\text{g/L}$)	Solubility (mg/L)	Ref	Koc (mL/g)	Ref	Soil Half Life	Fish Consumption AWQCs (mg/L)	Ref	Whole Body Half Life	Ref
Aniline	3.6E+04 (25°C)	Howard 1989	73.5 ¹ (calc)	ATSDR 1990a	NA	NA	NA	NA	NA
Benzothiazole	NA	NA	295.4 ¹ (calc)	ATSDR 1990a	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate	3E-01 (25°C)	Howard 1989	87,420	Howard 1989	148 days	NA	ATSDR 1989b	12 hr	ATSDR 1989b
4-Chloroaniline	3.9E+03	Howard 1989	230-469	Howard 1990	NA	NA	NA	NA	NA
Chloroethane	5.74E+03 (20°C)	EPA 1987	143 ¹ (calc)	Howard 1989	NA	NA	NA	NA	NA
1,1-Dichlorethane	8.69E+03	EPA 1986b	14	EPA 1986b	NA	NA	NA	NA	NA
1,2-Dichloroethane	5.50E+03	EPA 1986b	30	EPA 1986b	NA	NA	NA	NA	NA
1,2-Dichloropropane	8.52E+03	EPA 1986b	14	EPA 1986b	NA	2.43E-01	NA	NA	EPA 1986a
Dimethyl disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrazine	3.41E+08	EPA 1986b	0.1	EPA 1986b	NA	NA	NA	NA	NA
Lindane	1.7E+01	ASTDR 1989b	1,000	ATSDR 1989b	100 days	3.1E-05	ATSDR 1990c	NA	ATSDR 1989b

Table 2-2
(continued)

Compounds ($\mu\text{g/L}$)	Solubility (mg/L)	Ref	Koc (mL/g)	Ref	Soil Half Life	Ref	Fish Consumption AWQCs (mg/L)	Ref	Whole Body Half Life	Ref
Methyl Ethyl Ketone	$2.68\text{E}+05$	EPA 1986b	4.5	EPA 1986b	NA	NA	NA	NA	49-96 min. plasma half life inhalation	ATSDR 1989b
4-Methylphenol	$2.26\text{E}+04$	Howard 1989	49	Howard 1989	NA	NA	NA	NA	NA	NA
Monomethyl hydrazine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	33	EPA 1987	871	Howard 1989	3.6 mos	Howard 1989	$6.20\text{E}-01^2$	EPA 1986a	NA	NA
Naphthalene Carbonitrile	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi- methylamine	$1.0\text{E}+06$	EPA 1986b	1,000	ATSDR 1989b	50 days	ATSDR 1989b	NA	NA	NA	NA
Unsymmetrical dimethyl hydrazine	$1.24\text{E}+08$	EPA 1986b	0.2	EPA 1986b	NA	NA	NA	NA	NA	NA
Vinyl Acetate	20,000 (20°C)	Howard 1989	19.59^1 (calc)	Howard 1989	NA	NA	NA	NA	NA	NA

¹ KOC data were not available for several chemicals. In these instances, the values were calculated based on the log Kow. If the chemical was an aromatic with a log Kow between 2 to 6.6, the following equation was used:

$$\log \text{KOC} = 0.937 \log \text{KOW} - 0.006 \text{ (Lyman et. al. 1982)}$$

For aromatics with a log KOW falling outside the given range as well as all other organic substances, the following equation was used:

$$\log \text{KOC} = 0.544 \log \text{KOW} + 1.377 \text{ (Lyman et.al. 1982)}$$

² AWQC for the protection of freshwater aquatic life from chronic effect.

NA - not available.

Table 2-3
Selection of Pollutants of Concern
in the Hydrazine Rinsewater

Chemical	Inhalation Pathway	Soil pathway	Surface Water Pathway
ORGANICS	X		
Acetone	X	X	X
Acetonitrile	X		
Acrylonitrile	X	X	X
Aldrin	X	X	X
Aniline	X	X	X
Atrazine	X	X	X
Benzene	X		
Benzaldehyde	X		
Benzofuran	X	X	X
Benzoic Acid	X	X	X
Benzonitrile	X	X	X
Benzothiazole	X	X	X
Biphenyl	X		
Bis(2-ethylhexyl)phthalate	X	X	X
Carbazole	X	X	X
Carbon Tetrachloride	X		
4-Chloroaniline	X	X	X
Chlorobenzene	X		
4-Chlorobiphenyl	X	X	X
4,4-Chlorobiphenyl	X	X	X
Chloroethane	X	X	X
Chloroform	X		
Dibenzofuran	X	X	X
Dichlorobenzenes (total)	X		

Table 2-3
(continued)

VOLUME III

Chemical	Inhalation Pathway	Soil pathway	Surface Water Pathway
1,4-Dichlorobenzene	X		
1,1-Dichloroethane	X		
1,2-Dichloroethane	X	X	X
1,1-Dichloroethene	X		
1,2-Dichloroethene	X		
1,2-Dichloropropane	X		
Dieldrin	X	X	X
Dimethyldisulfide	X		
Hexachlorobenzene	X	X	X
Hydrazine	X	X	X
Lindane	X	X	X
Malathion	X	X	X
Methyl chloride	X		
Methylene chloride	X		
Methyl ethyl ketone	X	X	X
4-Methylphenol	X	X	X
Monomethyl hydrazine	X	X	X
Naphthalene	X	X	X
Naphthalene carbonitrile	X	X	X
n-Nitrosodimethylamine	X	X	X
PAHs			
Acenaphthalene	X	X	X
Acenaphthene	X	X	X
Benzo(a)pyrene	X	X	X
Chrysene	X	X	X
Dibenzo(a,h)anthracene	X	X	X
Fluoroanthene	X	X	
Fluorene	X	X	X
Phenanthrene	X	X	X

Table 2-3
(continued)

VOLUME III

Chemical	Inhalation Pathway	Soil pathway	Surface Water Pathway
Pyrene	X	X	X
Parathion	X	X	X
Pentachlorobenzene	X	X	
Phenol	X	X	
Pyridine	X		
Quinoline	X	X	X
Tetrachlorobenzene	X	X	
Tetrachloroethene	X		
Toluene	X	X	
Trichlorobenzene	X		X
Trichloroethene	X	X	
Unsym. dimethyl hydrazine	X	X	X
Vapona	X		X
Vinyl acetate	X		
Vinyl chloride	X		
Xylenes (total)	X		
INORGANICS			
Arsenic	X	X	X
Cadmium	X	X	
Chromium (III)	X		
Chromium (VI)	X		
Copper	X		X
Iron	X		
Lead	X		
Mercury	X	X	
Selenium	X		
Silver	X		
Zinc	X		X

VOCs excluded from the soil pathway included chloroethane, 1,1-dichloroethane, and vinyl acetate. All other organic compounds predicted in the emissions list were included for evaluation in the final soil pathway. All inorganics, except for arsenic, cadmium, and mercury were eliminated from the soil pathway on the basis of the background soil criteria discussed in Subsection 7.4 of Volume I, of WESTON (1991). The final list of pollutants that were evaluated for the soil pathway is presented in Table 2-3. Table 2-4 shows the screening data used to exclude inorganic compounds (i.e., metals) from the soils pathways. Only those metals for which emission rates could be predicted are included.

2.4 SURFACE WATER PATHWAY

The approach for excluding pollutants via the surface water pathway is outlined in Subsection 7.5 of Volume I (WESTON, 1991). Table 2-3 is a list of pollutants of concern in the hydrazine rinsewater for this pathway. Note that all VOCs were excluded from the surface water pathway using the same criteria as employed for soils. In addition, surface water concentrations for the pollutants were selected for analysis in the surface water pathway if the predicted surface water concentrations for a given chemical exceeded 10% of its respective AWQC. Table 2-5 presents a comparison of Tier 1 surface water concentrations with the AWQC for those compounds that were screened out of the surface water pathway.

2.5 CONSUMPTION OF BREAST MILK

The selection of pollutants in this pathway was identical to Subsection 7.6 of Volume I of (WESTON, 1991). All organic compounds were included in the evaluation of the breast milk consumption pathway for noncarcinogenic effects. Those organics classified as oral carcinogens were evaluated by this pathway. Inorganics were excluded from this evaluation because of the insufficiency of data for estimating breast milk concentrations.

Table 2-4
Selection of Contaminants of Potential Concern
for the Hydrazine Rinsewater

Inorganic Pollutants	RMA Upper Range Emission Rates g/sec	Upper 95% Deposition Rate g/M2/yr	Background Soil Concentration Mean (a) mg/Kg	Concentration in Soil .01M Upper 95% Emissions mg/Kg	Soil: Background Ratio Mean	Soil Concentration as % of Background Mean
Arsenic (d,e)	4.24E-08	5.68E-09	ND (a)	7.97E-07	NA	NA
Cadmium (d)	3.10E-10	4.15E-11	ND (a)	5.83E-09	NA	NA
Chromium III	1.29E-09	1.73E-10	14.4 (a)	2.43E-08	1.69E-09	0.000 (f)
Chromium IV	4.42E-11	5.92E-12	1.44 (b)	8.31E-10	5.77E-10	0.000
Copper	3.17E-09	4.25E-10	8 (a)	5.96E-08	7.45E-09	0.000
Iron	9.68E-05	1.30E-05	16424 (c)	1.82E-03	1.11E-07	0.000
Lead (d,e)	1.63E-09	2.18E-10	15.3 (a)	3.07E-08	2.00E-09	0.000
Mercury (d)	2.02E-09	2.71E-10	ND (a)	3.80E-08	NA	NA
Selenium	5.21E-09	6.98E-10	0.97 (c)	9.80E-08	1.01E-07	0.000
Silver	3.24E-11	4.34E-12	8.3 (c)	6.09E-10	7.34E-11	0.000
Zinc	1.43E-08	1.92E-09	42.2 (a)	2.69E-07	6.37E-09	0.000

(a) Source: Personal Communication with Katherine Cain (PMRMA), 1991. These data were collected under the off-post RI and is in the RMA database.

(b) Assumed 10% of total chromium.

(c) Source: WESTON, Draft Background Geographical Characterization Report, Rocky Flats Plant, Golden, Colorado.

(d) Selected as a contaminant of concern for soil pathway analysis. However, at EPA's request, lead was not evaluated for potential noncarcinogenic and carcinogenic risks. Rather, for lead, estimated soil concentrations were compared to clean-up criteria, and air concentrations to air quality standards.

(e) Carcinogen by oral route of administration.

(f) Values shown as 0.0000 are <0.001 because of rounding off to the nearest one-thousandth.

NA — Not able to be calculated.

Table 2-5
Tier 1 Surface Water Pathway
Screening Analysis for Hydrazine Rinsewater

Pollutants	Emission Rate (g/sec)	Total Deposition Rate (g/m ² *yr)	Total Basin Deposition (g/yr)	Water Concentration (mg/L)	AWQC Fish Ingestion (mg/L)
<i>Organics</i>					
Fluoranthene	5.42E-12	4.88E-15	6.32E-10	1.16E-15	5.40E-02
Pentachlorobenzene	6.67E-13	6.00E-16	7.77E-11	1.43E-16	8.50E-02
Phenol	5.60E-12	5.04E-15	6.53E-10	1.20E-15	3.50+00
Tetrachlorobenzene	3.27E-13	2.94E-16	3.81E-11	7.02E-17	4.80E-02
<i>Inorganics</i>					
Cadmium	3.10E-10	2.79E-13	3.61E-08	6.66E-14	1.00E-02
Chromium (VI)	1.34E-09	1.21E-12	1.56E-07	2.88E-13	5.00E-02
Iron	9.68E-05	8.71E-08	1.13E-02	2.08E-08	3.00E-01
Lead	1.63E-09	1.47E-12	1.90E-07	3.50E-13	5.00E-02
Mercury	2.02E-09	1.82E-12	2.35E-07	4.34E-13	1.46E-04
Selenium	5.21E-09	4.69E-12	6.07E-07	1.12E-12	1.00E-02
Silver	3.24E-11	2.92E-14	3.78E-09	6.96E-15	5.00E-02

^aAWQC for water and fish ingestion for chromium (VI), which are lower (more conservative) than chromium (III).

SECTION 3

ESTIMATION OF EMISSION RATES

Incremental emission estimates were developed by WESTON for the option of incinerating the hydrazine rinsewater in the SQI proposed for the Basin F liquid waste. The development of the emission estimates, as well as the risk assessment as a whole, treat the hydrazine rinsewater as a negligible addition to the Basin F liquid waste (only 2.7% of the total) that will not affect the combustion or physical flue gas characteristics of the proposed incinerator (i.e., the destruction of the Basin F liquid and hydrazine rinsewater are independent and no additional atmospheric dispersion and deposition modeling will be required of the combined Basin F liquid and hydrazine rinsewater). Many of the organics and all of the inorganics in the hydrazine rinsewater were previously evaluated in the Basin F Liquid Incineration Project, Volume I of the Final Draft Human Health Risk Assessment (WESTON, 1991).

The waste feed characteristics of the composite rinsewater were based on the results of the chemical characterization provided by Harding Lawson Associates (ESE, 1989) with the concurrence of the U.S. Army. The composite hydrazine rinsewater waste feed characteristics were based on burning all of the 50,000 gallons in Tank US-3, 200,000 gallons in Tank US-4, and 40,000 gallons in the In-Ground Sump within the 2-year period of the proposed incinerator operation, assuming 7,000 operating hours per year. A summary of emission rates for principal organic hazardous constituents (POHCs) and products of incomplete combustion (PICs) is presented in Tables 3-1 and 3-2, respectively. The organic compound concentration data, the resultant estimate of the composite waste feed and its basis, and the Destruction Removal Efficiencies (DREs) are presented in Subsection 9.5 (Supporting Documentation in this volume). The base case concentration for each compound in each individual tank or sump was estimated from the averages of the three analyses for that compound and source. Only those compounds with at least one value above the detection limit were considered. For compounds with at least one sample value

Table 3-1

**Organic Emission Rates from Incineration
of Rocky Mountain Arsenal Hydrazine Rinsewater
(Principal Organic Hazardous Constituents)**

Compounds	Normalized Emission Rate (tons/yr)	Normalized Destruction Efficiency (%)	Emission Rate (grams/sec)
Acetone	3.500E-09	99.9900	1.26E-10
Aldrin	4.910E-12	99.9900	1.77E-13
Aniline	1.780E-07	99.9900	6.41E-09
Atrazine	1.100E-09	99.9900	3.96E-11
Benzene	1.020E-09	99.9900	3.67E-11
Benzothiazole	3.690E-10	99.9900	1.33E-11
bis(2-Ethylhexyl)phthalate	2.180E-15	99.9900	7.85E-12
4-Chloroaniline	1.020E-10	99.9900	3.67E-12
Chlorobenzene	2.450E-10	99.9900	8.82E-12
Chloroethane	8.990E-09	99.9900	3.24E-10
Chloroform	4.380E-08	99.9900	1.58E-09
Chloromethane	1.210E-09	99.9900	4.36E-11
1,1-Dichloroethane	2.920E-09	99.9900	1.05E-10
1,2-Dichloroethane	9.110E-10	99.9900	3.28E-11
1,1-Dichloroethene	1.560E-09	99.9900	5.62E-11
1,2-Dichloropropane	5.790E-10	99.9900	2.08E-11
Dieldrin	9.020E-12	99.9900	3.25E-13
Dimethyl Disulfide	2.480E-09	99.9900	8.93E-11
Hydrazine	3.070E-05	99.9900	1.11E-06
Lindane	4.190E-12	99.9900	1.51E-13
Malathion	1.240E-11	99.9900	4.46E-13
Methylene Chloride	7.310E-08	99.9900	2.63E-09
Methylethyl ketone	1.530E-09	99.9900	5.51E-11
4-Methylphenol	1.390E-09	99.9900	5.00E-11
Monomethyl hydrazine	9.720E-06	99.9900	3.50E-07

Table 3-1
(continued)

VOLUME III

Compounds	Normalized Emission Rate (tons/yr)	Normalized Destruction Efficiency (%)	Emission Rate (grams/sec)
Naphthalene	1.640E-10	99.9900	5.90E-12
N-Nitrosodimethylamine	9.880E-09	99.9900	3.56E-10
Parathion	1.960E-11	99.9900	7.06E-13
Phenanthrene	3.076E-11	99.9891	1.11E-12
Phenol	1.555E-10	99.9775	5.60E-12
Tetrachlorethene	1.670E-10	99.9900	6.01E-12
Toluene	2.660E-09	99.9900	9.58E-11
Trichloroethene	1.780E-09	99.9900	6.41E-11
Unsymmetrical dimethyl hydrazine	3.840E-05	99.9900	1.38E-06
Vapona	7.740E-11	99.9900	2.79E-12
Vinyl acetate	1.100E-09	99.9900	3.96E-11
Vinyl chloride	1.020E-09	99.9900	3.67E-11
o,p-Xylene (total)	1.900E-10	99.9900	6.84E-12

Table 3-2

**Organic Emission Rates from Incineration
of Rocky Mountain Arsenal Hydrazine Rinsewater
(Products of Incomplete Combustion)**

PICs with Specific Precursors	Normalized Emission Rate (tons/yr)	Emission Rate (grams/sec)
Acenaphthalene	3.958E-08	1.42E-09
Acenaphthene	3.958E-08	1.42E-09
Acetonitrile	3.174E-06	1.14E-07
Acrylonitrile	1.347E-06	4.85E-08
Benzaldehyde	8.111E-08	2.92E-09
Benzo(a)pyrene	7.916E-08	2.85E-09
Benzofuran	3.958E-07	1.42E-08
Benzoic Acid	3.962E-08	1.43E-09
Benzonitrile	8.653E-07	3.12E-08
Biphenyl	3.976E-07	1.43E-08
Carbazole	1.781E-09	6.41E-11
Carbon Tetrachloride	5.155E-09	1.86E-10
4-Chlorobiphenyl	2.511E-10	9.04E-12
Chrysene	7.916E-09	2.85E-10
Dibenzo(a)anthracene	7.916E-08	2.85E-09
Dibenzofuran	7.916E-09	2.85E-10
Dichlorobenzene	1.021E-09	3.67E-11
4,4'-Dichlorobiphenyl	1.265E-11	4.55E-13
1,2-Dichloroethene	1.350E-09	4.86E-11
Fluoranthene	7.916E-08	2.85E-09
Fluorene	7.916E-09	2.85E-10
Hexachlorobenzene	2.385E-08	8.59E-10
Naphthalene Carbonitrile	8.653E-07	3.12E-08
Pentachlorobenzene	9.734E-09	3.50E-10
Pyrene	1.583E-07	5.70E-09

Table 3-2
(continued)

VOLUME III

PICs with Specific Precursors	Normalized Emission Rate (tons/yr)	Emission Rate (grams/sec)
Pyridine	8.653E-07	3.12E-08
Quinoine	8.905E-09	3.21E-10
Tetrachlorobenzene	4.769E-09	1.72E-10
Trichlorobenzene	2.420E-09	8.71E-11

above the detection limit was assumed for the analyses when the compound was not detected. The composite feed characterization was calculated as the sum of the average values, which were weighted relative to the total quantity in the tank or sump, and were then used as the basis for estimating emissions.

The organic compound feed rates were provided to Dr. Barry Dellinger of the University of Dayton Research Institute in order to estimate the thermal destruction of POHCs and PICs based on the results of his laboratory studies. In order to ensure a conservatively high estimate of risk, the destruction efficiency of POHCs, i.e., the compounds in the waste feed, were limited to a maximum of 99.99% and the emission of PICs were not normalized. This is the same approach used for the Basin F liquid as described in Section 5, Volume I and Appendix 5B Volume II of (WESTON, 1991).

Metals emissions were estimated by WESTON using the same methodology and assumptions that were used for the Basin F liquid waste (as discussed in Section 5, Volume I and Appendix 5A, Volume II; WESTON, 1991). The only differences in methodology and assumptions from the analysis of metals emissions from the Basin F liquid are that no test burn results were available for evaluation.

A summary of the metals emission rates is shown in Table 3-3. Supporting documentation for the metals is presented in Subsection 9.5 of this volume.

Dioxins/furans, criteria pollutants and acid gas emissions were also not considered in the incremental analysis for the addition of the hydrazine rinsewater to the Basin F liquid incinerator because emissions of these pollutants were considered in the Basin F liquid analysis. Estimates of these emissions would not be changed by the addition of the hydrazine rinsewater because these emission estimates are based on the volumetric flue gas flow rate. This flow rate was assumed to be only negligibly affected by the additional waste

Table 3-3

**Incremental Metals Emission Rates
for Rocky Mountain Arsenal Hydrazine Rinsewater**

Pollutant	Base Case (a)			Sensitivity Case (b)		
	(ton/yr)	(lb/hr)	(g/sec)	(ton/yr)	(lb/hr)	(g/sec)
Aluminum	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA
Arsenic	1.04E-06	2.98E-07	3.76E-08	1.18E-06	3.36E-07	4.24E-08
Barium	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA
Boron	NA	NA	NA	NA	NA	NA
Cadmium	6.06E-09	1.73E-09	2.18E-10	8.62E-09	2.46E-09	3.10E-10
Calcium	NA	NA	NA	NA	NA	NA
Chromium	2.78E-08	7.95E-09	1.00E-09	3.73E-08	1.06E-08	1.34E-09
Cobalt	NA	NA	NA	NA	NA	NA
Copper	3.97E-08	1.13E-08	1.43E-09	8.81E-08	2.52E-08	3.17E-09
Iron	9.63E-04	2.75E-04	3.47E-05	2.69E-03	7.68E-04	9.68E-05
Lead	3.91E-08	1.12E-08	1.41E-09	4.54E-08	1.30E-08	1.63E-09
Lithium	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA

Table 3-3
(continued)

Pollutant	Base Case (a)			Sensitivity Case (b)		
	(ton/yr)	(lb/hr)	(g/sec)	(ton/yr)	(lb/hr)	(g/sec)
Mercury	3.92E-08	1.12E-08	1.41E-09	5.60E-08	1.60E-08	2.02E-09
Molybdenum	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA
Selenium	1.19E-07	3.39E-08	4.27E-09	1.45E-07	4.14E-08	5.21E-09
Silicon	NA	NA	NA	NA	NA	NA
Silver	5.42E-10	1.55E-10	1.95E-11	9.00E-10	2.57E-10	3.24E-11
Sodium	NA	NA	NA	NA	NA	NA
Strontium	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA
Titanium	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA
Yttrium	NA	NA	NA	NA	NA	NA
Zinc	3.12E-07	8.90E-08	1.12E-08	3.97E-07	1.13E-07	1.43E-08

NA - Not applicable.

feed since the incinerator capacity would be essentially the same. The hydrazine rinsewater totals only 290,000 gallons compared with the 10,500,000 gallons of the Basin F liquid. Therefore, the hydrazine rinsewater comprises only 2.7% of the combined total. Decontamination water totaling 80,000 gallons will also be incinerated but this is only 0.7% of the combined total, so it is also expected to have a negligible effect.

SECTION 4
AIR QUALITY AND DEPOSITION MODELING ANALYSIS

4.1 INTRODUCTION

In the calculations of the human health risk assessment based on the hydrazine rinsewater, it was assumed that the physical characteristics of the incinerator, the points of exposure, and the deposition area had not changed from those incorporated in Volume I of WESTON (1991) based on the Basin F liquid waste. A detailed description of the air quality and deposition modeling analysis is found in Section 6 of Volume I and Appendix 6A of Volume II of WESTON (1991).

SECTION 5

EXPOSURE ASSESSMENT

5.1 INTRODUCTION

The exposure assessment for the hydrazine rinsewater was performed identically to the methods described in Section 8 of Volume I of WESTON (1991). The four potential reasonable maximally exposed individuals (RMEIs), their locations, appropriate exposure routes, and general assumptions for each scenario are described therein. Refer to the supporting documentation tables in Sections 9 of this volume for data regarding exposure algorithms and doses for each scenario, routes of exposure, and pollutants in the hydrazine rinsewater.

SECTION 6

TOXICITY ASSESSMENT

6.1 INTRODUCTION

The toxicity assessment for the hydrazine rinsewater was performed identically to the methods discussed in Section 9 of Volume I of WESTON (1991). It should be noted that a number of chemicals present in the hydrazine rinsewater also were evaluated in Volume I of WESTON (1991). Table 6-1 presents toxicity values for only those chemicals not originally evaluated. However, risk calculations calculated in Section 9 of the Supporting Documentation in this volume were determined for all chemicals present in the hydrazine rinsewater.

6.2 CANCER SLOPE FACTORS

The slope factors for the carcinogenic pollutants that were not initially evaluated in Volume I of WESTON (1991) are presented in Table 6-1. The reference or basis for each of the slope factors is indicated.

6.3 REFERENCE DOSES FOR NONCARCINOGENIC EFFECTS

Table 6-2 summarizes the reference doses for noncarcinogenic effects of chemicals not previously evaluated in Volume I of WESTON (1991).

Table 6-1
Slope Factors for Carcinogens [(mg·kg/day⁻¹)]
in Hydrazine Rinsewater

Pollutants	EPA Carcinogenic Classification	IARC Carcinogenic Classification	Inhalation Route Slope Factor	Reference or Basis of Inhalation Slope Factor	Oral Route Slope Factor	Reference or Basis of Oral Slope Factor	Dermal Route Slope Factor*
Aniline	B2	2B	5.70E-03	OSF	5.70E-03	EPA, 1990	1.14E-02 (sv)
bis(2-Ethylhexyl) phthalate	B2	NL	1.40E-02	OSF	1.40E-02	EPA, 1990	2.80E-02 (sv)
1,1-Dichloroethane	C	NL	NSF	NA	NSF	NA	NSF
1,2-Dichloroethane	B2	2B	9.10E-02	EPA, 1990	9.10E-02	EPA, 1990	1.82E-01 (sv)
1,1-dimethyl hydrazine (uns)	C	2B	8.70E+00	OSF	8.70E+00	EPA, 1990	1.74E+01 (sv)
Hydrazine	B2	2B	1.71E+01	EPA, 1990	3.00E+00	EPA, 1990	6.00E+00 (sv)
Lindane	B2	NL	1.30E+00	OSF	1.30E+00	EPA, 1990	2.60E+00 (sv)
4-Methylphenol	C	NL	NSF	NA	NSF	NA	NSF
Monomethyl hydrazine	NL	NL	1.10E+00	OSF	1.10E+00	EPA, 1990	2.20E+00 (sv)
N-Nitrosodimethyl- amine	B2	2A	5.10E+01	EPA, 1990	5.10E+01	EPA, 1990	1.02E+02 (sv)

EPA, 1990 = Health Effects Assessment Summary Tables, Fourth Quarter, United States Environmental Protection Agency, Sept. 1990.

NL = Carcinogenicity not categorized.

NSF = No slope factor available.

OSF = Oral slope factor.

* Substance was treated as a volatile (v) or semi-volatile (sv) in deriving the dermal slope factor.

NA - Not available.

Table 6-2

Reference Doses (RfDs) for Noncarcinogens (mg/kg/day) in Hydrazine Rinsewater

Pollutants	Inhalation Route RfD	Reference or Basis of Inhalation RfD	Oral Route RfD	Reference or Basis of Oral RfD	Dermal Route RfD*
Aniline	7.76E-03	ACGIH-TWA	1.95E-03	Derived	9.75E-04 (sv)
Benzothiazole	1.00E-03	Oral RfD	1.00E-03	Derived	5.00E-04 (sv)
bis(2-Ethylhexyl)phthalate	5.10E-03	ACGIH-TWA	4.00E-03	EPA, 1990	1.00E-02 (sv)
4-Chloroaniline	4.00E-03	Oral RfD	4.00E-03	EPA, 1990	2.00E-03 (sv)
Chloroethane	2.65E+00	ACGIH-TWA	NRD	NA	NC (v)
1,1-Dichloroethane	1.00E-01	EPA, 1990	1.00E+01	EPA, 1990	NC (v)
1,2-Dichloroethane	4.08E-02	ACGIH-TWA	4.89E-03	Derived	2.45E-03 (sv)
1,1-dimethyl hydrazine(uns)	1.22E-03	ACGIH-TWA	1.22E-03	Derived	6.10-04 (sv)
Hydrazine	1.33E-04	ACGIH-TWA	6.00E-04	Derived	3.00-04 (sv)
Lindane	5.10E-04	ACGIH-TWA	3.00E-04	EPA, 1990	1.50-04 (sv)
Methyl ethyl ketone	9.00E-02	EPA, 1990	5.00-01	EPA, 1990	2.50-02 (sv)
4-Methylphenol	1.02E-02	REL	5.00-02	EPA, 1990	2.50-02 (sv)
Monomethyl hydrazine	1.94E-05	ACGIH-TWA	2.20E-04	Derived	1.10E-04 (sv)
Naphthalene	5.10E-02	ACGIH-TWA	4.00E-03	EPA, 1990	2.00-03 (sv)
Naphthalene Carbonitrile	5.10-02	ACGIH-TWA	4.00E-03	EPA, 1990	2.00-03 (sv)
N-Nitrosodimethylamine	2.80E-04	Oral RfD	2.80E-04	Derived	1.40E-04 (sv)
Vinyl acetate	2.00E-01	EPA, 1990	1.00E+00	EPA, 1990	NC (v)

ACGIH-TWA = American Conference of Governmental Industrial Hygienists Time Weighted Average.
EPA, 1990 = Health Effects Assessment Summary Tables. 4th Quarter. United States Environmental Protection Agency, Sept. 1990.

NRD = No reference dose available and it cannot be derived.

* Substance was treated as a volatile (v) or semi-volatile (sv) in deriving the dermal reference dose.

Note: The reference dose for Naphthalene was used for Naphthalene Carbonitrile because an appropriate reference dose could not be derived.

Derived = Derived from existing toxicity data (see Appendix 9A, Vol. II for procedure).

NC = Not of concern through this exposure route (see

Section 8 of Vol. I of the Final Draft, Human Health Risk Assessment Document).

SECTION 7

RISK CHARACTERIZATION AND DISCUSSION

7.1 INTRODUCTION

In this section, both carcinogenic and noncarcinogenic risks, as a result of exposure under both base and sensitivity case emissions rates, were evaluated based on the daily intake of pollutants outlined in Section 5 and the toxicity values presented in Section 6. The total lifetime carcinogenic risk and the noncarcinogenic hazard indices were calculated according to the procedures described in Section 10 of Volume I of WESTON (1991). Section 10 of Volume I specifically discusses the calculations and the application of the sensitivity case emissions. For comparison, the risk results contained in Volume I of WESTON (1991) are presented in Tables 7-1 and 7-2.

7.2 RISK RESULTS

7.2.1 Carcinogenic Risks

Table 7-1 shows the carcinogenic risk comparisons between hydrazine rinsewater and Basin F liquid waste for all four scenarios under base case and sensitivity case emissions. Note that base case emissions most closely approximate the "reasonable maximum exposure" described in Superfund guidance by EPA (1989a). Hydrazine rinsewater incineration, exclusive of Basin F liquid risk, results in a $1.2\text{E-}08$ cancer risk in both base case and sensitivity case emission conditions for the Farmer scenario. Farmer scenario represents the highest cancer risk of all four scenarios. Assuming additivity with Basin F liquid waste (WESTON has made the same air modeling and exposure assumptions for both hydrazine rinsewater and Basin F liquid incineration), the total cancer risk under base case emissions for the Farmer scenario is $5.8\text{E-}08$ and under sensitivity case emissions is $7.2\text{E-}08$. Figure 7-1 representing the additivity of Basin F and hydrazine rinsewater illustrates the

Table 7-1

**Total Lifetime Carcinogenic Risk for Hydrazine
Rinsewater and Basin F Liquid - Rocky Mountain Arsenal
for Four Exposure Scenarios**

Exposure Scenario	Lifetime Carcinogenic Risk			
	Base Case Emissions		Sensitivity Case Emissions	
	Hydrazine	Basin F Liq ¹	Hydrazine	Basin F Liq ¹
<i>Resident A</i>				
Adult	1.0E-08	6.7E-10	1.0E-08	9.1E-10
Child	1.6E-09	7.2E-09	1.6E-09	1.8E-08
Infant	6.5E-10	6.1E-09	6.5E-10	2.8E-08
Total	1.2E-08	1.4E-08	1.2E-08	4.7E-08
<i>Resident B</i>				
Adult	1.6E-08	7.6E-10	1.6E-08	1.0E-09
Child	2.4E-09	1.6E-09	2.4E-09	3.8E-09
Infant	9.6E-10	1.3E-09	9.6E-10	5.6E-09
Total	2.0E-08	3.6E-09	2.0E-08	1.0E-08
<i>Farmer</i>				
Adult	4.1E-08	2.0E-09	4.1E-08	3.0E-09
Child	6.9E-09	2.9E-09	6.9E-09	7.0E-09
Infant	2.4E-09	2.4E-09	2.4E-09	1.1E-08
Total	5.1E-08	7.3E-09	5.1E-08	2.1E-08
<i>Worker</i>				
Adult	6.3E-12	6.8E-10	6.4E-12	1.8E-09
Total	6.3E-12	6.8E-10	6.4E-12	1.8E-09

¹ Risk results extracted from *Final Draft Human Health Risk Assessment, Volume I*, June 1991. (DCN 3886-44-01-ABTD).

Table 7-2

**Hazard Indices Calculated for Adult, Child, and Infants
for Hydrazine Rinsewater and Basin F Liquid Under
Four Exposure Scenarios**

Exposure Scenario	<u>Hazard Index</u>			
	Base Case Emissions		Sensitivity Case Emissions	
	Hydrazine	Basin F Liq ¹	Hydrazine	Basin F Liq ¹
<i>Resident A</i>				
Adult	1.7E-05	7.3E-02	2.3E-05	1.5E-01
Child	3.5E-05	1.7E-01	4.9E-05	3.3E-01
Infant	5.0E-05	1.1E-01	5.9E-05	2.3E-01
<i>Resident B</i>				
Adult	1.9E-05	1.5E-02	2.0E-05	3.0E-02
Child	3.6E-05	3.4E-02	3.9E-05	6.7E-02
Infant	6.6E-05	2.4E-02	6.7E-05	4.7E-02
<i>Farmer</i>				
Adult	4.1E-05	2.6E-02	4.3E-05	5.2E-02
Child	8.9E-05	5.9E-02	9.3E-05	1.2E-01
Infant	1.5E-04	4.1E-02	1.5E-04	8.2E-02
<i>Worker</i>				
Adult	6.4E-07	7.5E-03	1.3E-06	1.5E-02

¹ Risk results extracted from *Final Draft Human Health Risk Assessment, Volume I*, June 1991.
(DCN 3886-44-01-ABTD).

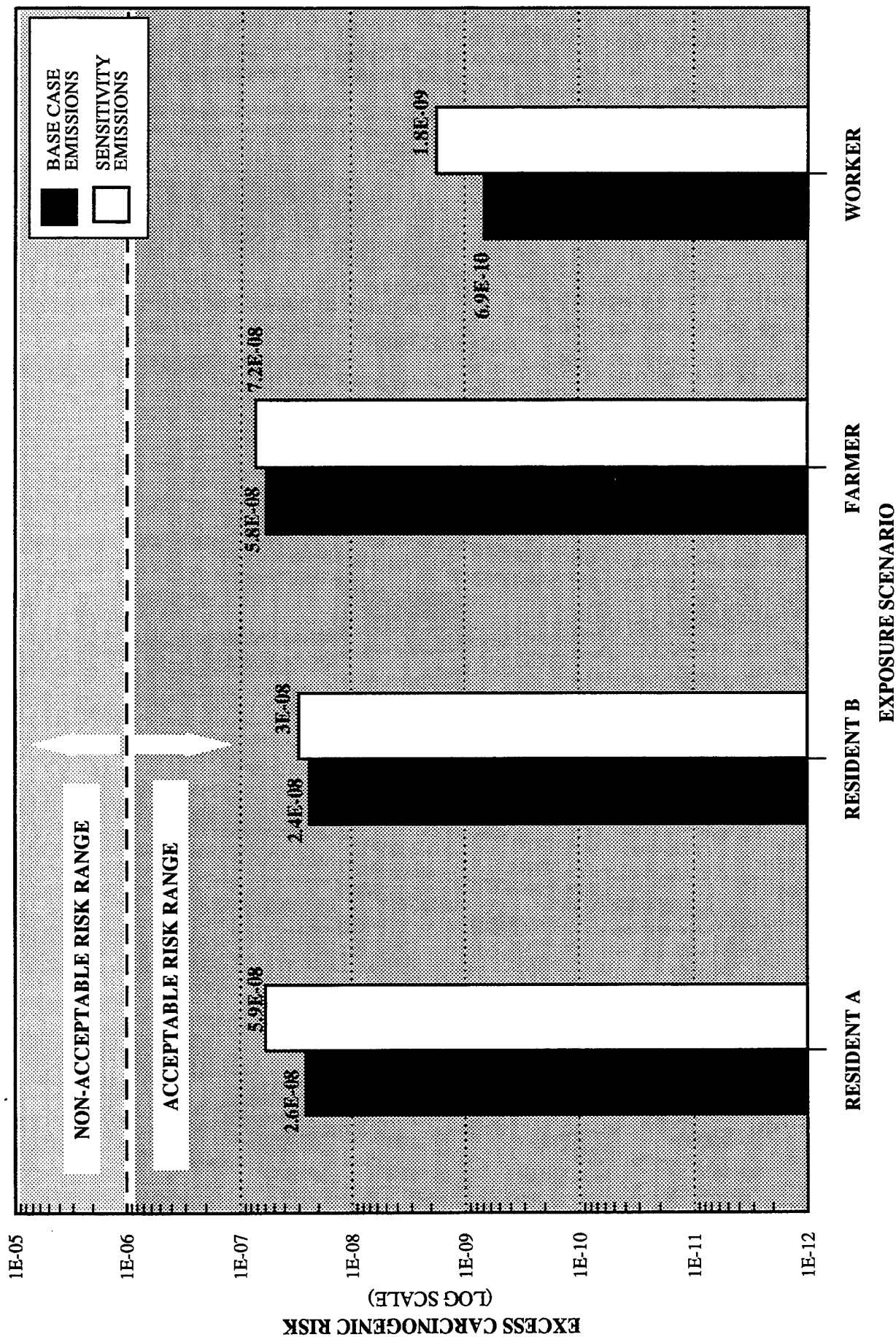


FIGURE 7-1 ADDITIVE TOTAL LIFETIME CARCINOGENIC RISK FOR RESIDENT, FARMER AND ON-SITE WORKER EXPOSURE SCENARIOS FOR HYDRAZINE RINSEWATER AND BASIN F LIQUID WASTE COMBINED

differences for all four scenarios. These values are between one and two orders of magnitude lower than the value of $1\text{E-}06$ developed in the Final Decision Document (Woodward-Clyde Consultants, 1990).

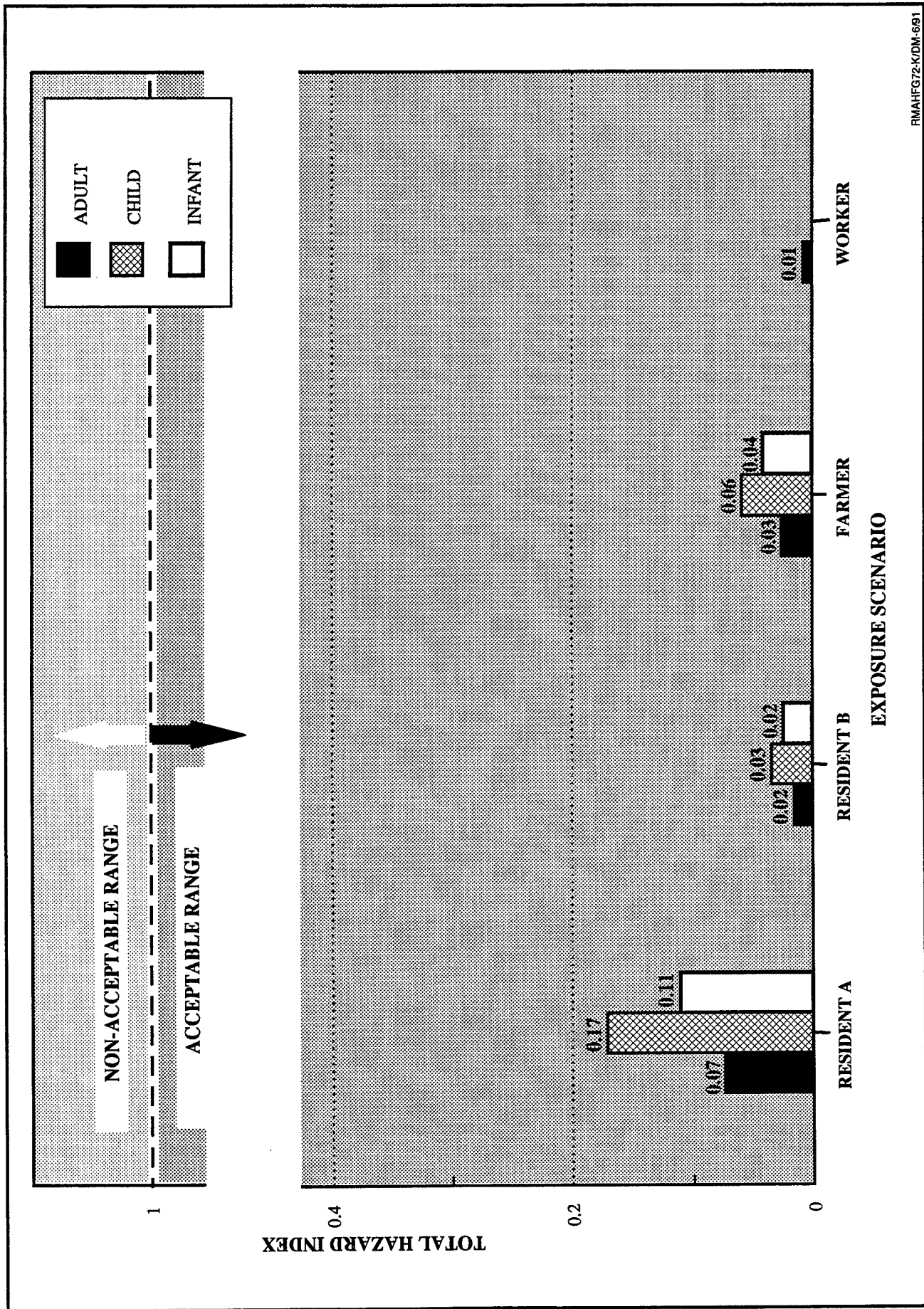
7.2.2 Noncarcinogenic Effects

Table 7-2 summarizes the hazard indices for adult, child, and infant for incineration of hydrazine rinsewater and Basin F liquid waste under all four scenarios. These values, like carcinogenic risk, have been calculated under base case and sensitivity case emissions. The highest hazard index for hydrazine rinsewater was the infant farmer scenario (sensitivity case), which was calculated to be $1.5\text{E-}04$. This is between three and four orders of magnitude below the value of 1.0 promulgated in the Final Decision Document (Woodward-Clyde Consultants, 1990). Assuming additivity between individual hazard indices, the highest combined exposure would be the sensitivity case for the child Resident-A scenario at a hazard index of $3.3\text{E-}01$. This and all combinations are illustrated in Figure 7-2 for base case emissions, and Figure 7-3 for sensitivity case emissions.

7.2.3 Conclusions

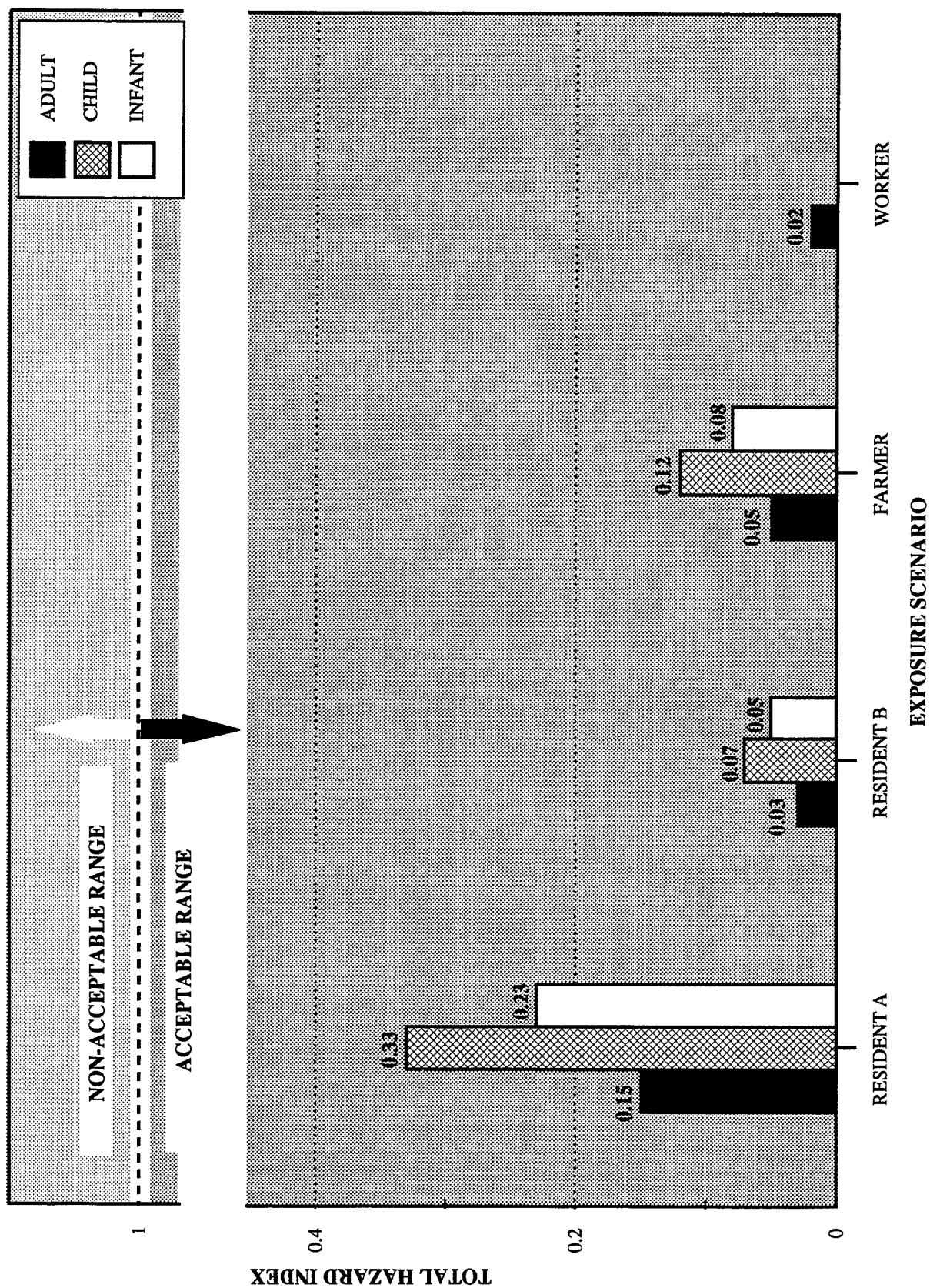
The overall uncertainty inherent in this risk assessment has been thoroughly discussed in Volume I, Section 10 of WESTON (1991). The reader is encouraged to review Section 10 of Volume I (WESTON, 1991) to gain an understanding of the conservatism underlying the final calculations. Note that the same air modeling and exposure assumptions have been made for both Basin F liquid and hydrazine rinsewater incineration.

As requested by EPA VIII (refer to General Comment 3, EPA, Volume IV of WESTON, 1991), lead was not incorporated into the risk calculations. Currently, lead is not assigned a cancer slope factor or a reference dose by EPA. However, Dr. Chris Weis, Toxicologist



RMAHFG72-K/DM-691

FIGURE 7-2 ADDITIVE TOTAL HAZARD INDICES FOR RESIDENT, FARMER AND ON-SITE WORKER EXPOSURE SCENARIOS FOR HYDRAZINE RINSEWATER AND BASIN F LIQUID WASTE



RMAHEG73-K/DM-691

FIGURE 7-3 ADDITIVE TOTAL HAZARD INDICES FOR RESIDENT, FARMER AND ON-SITE WORKER EXPOSURE SCENARIOS FOR HYDRAZINE RINSEWATER AND BASIN F LIQUID WASTE COMBINED UNDER SENSITIVITY CASE EMISSIONS

for EPA Region VIII, requested that a comparison be made between estimated lead soil concentrations and ambient air concentrations to soil cleanup levels and National Ambient Air Quality Standards (NAAQS), respectively. Table 7-3 shows the requested comparisons. Predicted lead levels in soil and air were well below the respective standards.

In conclusion, the addition of hydrazine rinsewater to the Basin F liquid waste does not pose a cancer risk or noncarcinogenic effect as defined in the Final Decision Document (Woodward- Clyde Consultants, 1990). This conclusion is highlighted by several conservative assumptions that were previously discussed in Volume I, Section 10 (WESTON, 1991):

- No environmental degradation has been assumed for any chemical in the waste stream (POHC) or formed by the incineration process (PIC).
- Even though the facility is operating for only 2 years, a 70-year lifetime exposure has been assumed (except for inhalation).

Table 7-3

**Comparison of Predicted Soil and Air Levels
of Lead From Hydrazine Rinsewater Incinerator to Soil
Cleanup and National Ambient Air Quality Standards (NAAQS)**

Inorganic Pollutant	Maximum ^a Predicted Soil Concentration (0.01m) Sensitivity Case (mg/kg)	Soil Cleanup ^b Level (mg/kg)	Predicted ^c Ambient Air Concentration Sensitivity Case (ug/m ³)	NAAQS ^d (ug/m ³)
Lead	7.07E-11	500-1,000	5.7E-10	1.5E+00

^a Refer to Table 1A in Section 9.1.1, last column, second page.

^b OSWER Directive 9355.4-02, September, 1989 (EPA, 1989b).

^c Refer to Table 1A in Section 9.1.1, second column, second page. Represents predicted average annual ambient air concentration.

^d 40 CFR 50. Three month annual average.

SECTION 8

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SECTION 9
SUPPORTING DOCUMENTATION

Included in this section are the detailed spreadsheets that document base case and sensitivity case emissions, exposure doses, and risk results for the Residents A and B, the farmer, and the on-site worker scenarios that have been summarized in this report.

9.1 RESIDENT A SCENARIO

9.1.1 Base Case Emissions — Resident A

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 20-Jun-91

TABLE 1-A										
A	B	C	D	E	F	G	H	I	J	K
2	3	4	5	6	7	8	9	10	11	12
BASE CASE	ER	AC	AVG. ANN. AMBIENT CONC.	TOTAL DEPOSITION RATE	DRY DEPOSITION RATE	CO AVERAGE CALCULATED CONC IN SOIL	CO MAXIMUM CALCULATED CONC IN SOIL	CO AVERAGE CALCULATED CONC IN SOIL	CO MAXIMUM CALCULATED CONC IN SOIL	
20-Jun-91 13:31:25 RES-A	EMISSION RATE g/sec	ug/M3	g/M2/yr	g/M2/yr	g/M2/yr	.2M mg/Kg	.2M mg/Kg	.1M mg/Kg	.1M mg/Kg	
13	1.26E-10	4.42E-11	NA	NA	NA	NA	NA	NA	NA	NA
14	1.14E-07	4.00E-08	3.52E-10	1.68E-10	NA	2.44E-09	2.47E-09	4.87E-09	4.94E-09	NA
15	4.85E-08	1.70E-08	NA	NA	NA	NA	NA	NA	NA	NA
16	1.77E-13	6.21E-14	5.47E-16	2.60E-16	2.60E-16	3.78E-15	3.84E-15	7.57E-15	7.68E-15	NA
17	6.41E-09	2.25E-09	1.98E-11	9.42E-12	9.42E-12	1.37E-10	1.39E-10	2.74E-10	2.78E-10	NA
18	3.96E-11	1.39E-11	1.22E-13	5.82E-14	5.82E-14	8.46E-13	8.59E-13	1.69E-12	1.72E-12	NA
19	2.92E-09	1.02E-09	9.02E-12	4.29E-12	4.29E-12	6.24E-11	6.33E-11	1.25E-10	1.27E-10	NA
20	3.67E-11	1.29E-11	NA	NA	NA	NA	NA	NA	NA	NA
21	1.42E-08	4.98E-09	4.39E-11	2.09E-11	2.09E-11	3.04E-10	3.08E-10	6.07E-10	6.16E-10	NA
22	1.43E-07	5.02E-10	4.42E-12	2.10E-12	2.10E-12	3.06E-11	3.10E-11	6.11E-11	6.20E-11	NA
23	3.12E-08	1.10E-08	9.64E-11	4.59E-11	4.59E-11	6.67E-10	6.77E-10	1.33E-09	1.35E-09	NA
24	1.33E-11	4.67E-12	4.11E-14	1.96E-14	1.96E-14	2.84E-13	2.88E-13	5.69E-13	5.77E-13	NA
25	1.43E-08	5.02E-09	NA	NA	NA	NA	NA	NA	NA	NA
26	7.85E-12	2.76E-12	2.43E-14	1.15E-14	1.15E-14	1.68E-13	1.70E-13	3.36E-13	3.40E-13	NA
27	6.41E-11	2.25E-11	1.98E-13	9.42E-14	9.42E-14	1.37E-12	1.39E-12	2.74E-12	2.78E-12	NA
28	1.86E-10	6.53E-11	NA	NA	NA	NA	NA	NA	NA	NA
29	3.67E-12	1.29E-12	1.13E-14	5.39E-15	5.39E-15	7.84E-14	7.96E-14	1.57E-13	1.59E-13	NA
30	8.82E-12	3.10E-12	NA	NA	NA	NA	NA	NA	NA	NA
31	9.04E-12	3.17E-12	2.79E-14	1.33E-14	1.33E-14	1.93E-13	1.96E-13	3.86E-13	3.92E-13	NA
32	4.55E-13	1.60E-13	1.41E-15	6.69E-16	6.69E-16	9.73E-15	9.87E-15	1.95E-14	1.97E-14	NA
33	3.24E-10	1.14E-10	1.00E-12	4.76E-13	4.76E-13	6.93E-12	7.03E-12	1.39E-11	1.41E-11	NA
34	1.58E-09	5.55E-10	NA	NA	NA	NA	NA	NA	NA	NA
35	2.85E-10	1.00E-10	8.81E-13	4.19E-13	4.19E-13	6.09E-12	6.18E-12	1.22E-11	1.24E-11	NA
36	3.67E-11	1.29E-11	NA	NA	NA	NA	NA	NA	NA	NA
37	2.32E-12	8.14E-13	NA	NA	NA	NA	NA	NA	NA	NA
38	1.05E-10	3.69E-11	NA	NA	NA	NA	NA	NA	NA	NA
39	3.28E-11	1.15E-11	1.01E-13	4.82E-14	4.82E-14	7.01E-13	7.11E-13	1.40E-12	1.42E-12	NA
40	5.62E-11	1.97E-11	NA	NA	NA	NA	NA	NA	NA	NA
41	4.86E-11	1.71E-11	NA	NA	NA	NA	NA	NA	NA	NA
42	2.08E-11	7.30E-12	NA	NA	NA	NA	NA	NA	NA	NA
43	3.25E-13	1.14E-13	1.00E-15	4.78E-16	4.78E-16	6.95E-15	7.05E-15	1.39E-14	1.41E-14	NA
44	8.93E-11	3.13E-11	NA	NA	NA	NA	NA	NA	NA	NA
45	8.59E-10	3.02E-10	2.65E-12	1.26E-12	1.26E-12	1.84E-11	1.86E-11	3.67E-11	3.73E-11	NA
46	1.11E-06	3.90E-07	3.43E-09	1.63E-09	1.63E-09	2.37E-08	2.41E-08	4.75E-08	4.81E-08	NA
47	1.51E-13	5.30E-14	4.67E-16	2.22E-16	2.22E-16	3.23E-15	3.27E-15	6.46E-15	6.55E-15	NA
48	4.46E-13	1.57E-13	1.38E-15	6.56E-16	6.56E-16	9.53E-15	9.67E-15	1.91E-14	1.93E-14	NA
49	4.36E-11	1.53E-11	NA	NA	NA	NA	NA	NA	NA	NA
50	2.63E-09	9.23E-10	NA	NA	NA	NA	NA	NA	NA	NA
51	5.51E-11	1.93E-11	1.70E-13	8.10E-14	8.10E-14	1.18E-12	1.19E-12	2.36E-12	2.39E-12	NA
52	5.00E-11	1.76E-11	1.54E-13	7.35E-14	7.35E-14	1.07E-12	1.08E-12	2.14E-12	2.17E-12	NA
53	3.50E-07	1.23E-07	1.08E-09	5.14E-10	5.14E-10	7.48E-09	7.59E-09	1.50E-08	1.52E-08	NA
54	5.90E-12	2.07E-12	1.82E-14	8.67E-15	8.67E-15	1.26E-13	1.28E-13	2.52E-13	2.56E-13	NA
55	3.12E-08	1.10E-08	9.64E-11	4.59E-11	4.59E-11	6.67E-10	6.77E-10	1.33E-09	1.35E-09	NA
56	3.56E-10	1.25E-10	1.10E-12	5.23E-13	5.23E-13	7.61E-12	7.72E-12	1.52E-11	1.54E-11	NA
57	1.42E-09	4.98E-10	4.39E-12	2.09E-12	2.09E-12	3.04E-11	3.08E-11	6.07E-11	6.16E-11	NA
58	1.42E-09	4.98E-10	4.39E-12	2.09E-12	2.09E-12	3.04E-11	3.08E-11	6.07E-11	6.16E-11	NA
59	2.85E-09	1.00E-09	8.81E-12	4.19E-12	4.19E-12	6.09E-11	6.18E-11	1.22E-10	1.24E-10	NA
60	1.42E-09	4.98E-10	4.39E-12	2.09E-12	2.09E-12	3.04E-11	3.08E-11	6.07E-11	6.16E-11	NA

12 ORGANICS

Bis(2-ethylhexyl)phthalate

Carbon Tetrachloride

4-Chloroaniline

Chlorobenzene

4-Chlorobiphenyl

4,4'-Chlorobiphenyl

Chloroethane

Chloroform

Dibenzofuran

Dichlorobenzenes (total)

1,4-Dichlorobenzene

1,1-Dichloroethane

1,2-Dichloroethane

1,1-Dichloroethene

1,2-Dichloroethene

1,2-Dichloropropane

Dieldrin

Dimethyldisulfide

Hexachlorobenzene

Hydrazine

Lindane

Malathion

Methyl chloride

Methylene chloride

Methyl ethyl ketone

4-Methylphenol

Monomethyl hydrazine

Naphthalene

Naphthalene carbonitrile

n-Nitrosodimethylamine

PAHS

Acenaphthalene

Acenaphthene

Benzo(a)pyrene

A	B	C	D	E	F	G	H	I	J	K
2			TABLE 1-A							
61	Chrysene		2.85E-10	1.00E-10	8.81E-13	4.19E-13	6.09E-12	6.18E-12	1.22E-11	1.24E-11
62	Dibenzo(a,h)anthracene		2.85E-09	1.00E-09	8.81E-12	4.19E-12	6.09E-11	6.18E-11	1.22E-10	1.24E-10
63	Fluoranthene		2.85E-09	1.00E-09	8.81E-12	4.19E-13	6.09E-12	6.18E-11	1.22E-10	1.24E-11
64	Fluorene		2.85E-10	1.00E-10	8.81E-13	4.19E-13	6.09E-12	6.18E-12	1.22E-11	1.24E-11
65	Phenanthrene		1.11E-12	3.90E-13	3.43E-15	1.63E-15	2.37E-14	2.41E-14	4.75E-14	4.81E-14
66	Pyrene		5.70E-09	2.00E-09	1.76E-11	8.38E-12	1.22E-10	1.24E-10	2.44E-10	2.47E-10
67	Parathion		7.06E-13	2.48E-13	2.18E-15	1.04E-15	1.51E-14	1.53E-14	3.02E-14	3.06E-14
68	Pentachlorobenzene		3.50E-10	1.23E-10	1.08E-12	5.14E-13	7.48E-12	7.59E-12	1.50E-11	1.52E-11
69	Phenol		5.60E-12	1.97E-12	1.73E-14	8.23E-15	1.20E-13	1.21E-13	2.39E-13	2.43E-13
70	Pyridine		3.12E-08	1.10E-08	NA	NA	NA	NA	NA	NA
71	Quinoline		3.21E-10	1.13E-10	9.92E-13	4.72E-13	6.86E-12	6.96E-12	1.37E-11	1.39E-11
72	Tetrachlorobenzene		1.72E-10	6.04E-11	5.31E-13	2.53E-13	3.68E-12	3.73E-12	7.35E-12	7.46E-12
73	Tetrachloroethene		6.01E-12	2.11E-12	NA	NA	NA	NA	NA	NA
74	Toluene		9.58E-11	3.36E-11	NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		8.71E-11	3.06E-11	2.69E-13	1.28E-13	1.86E-12	1.89E-12	3.72E-12	3.78E-12
76	Trichloroethene		6.41E-11	2.25E-11	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		1.38E-06	4.84E-07	4.26E-09	2.03E-09	2.93E-08	2.99E-08	5.90E-08	5.98E-08
78	Vapona		2.79E-12	9.79E-13	8.62E-15	4.10E-15	5.96E-14	6.05E-14	1.19E-13	1.21E-13
79	Vinyl acetate		3.96E-11	1.39E-11	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		3.67E-11	1.29E-11	NA	NA	NA	NA	NA	NA
81	Xylenes (total)		6.84E-12	2.40E-12	NA	NA	NA	NA	NA	NA
82										
83	INORGANICS									
84	Arsenic		3.76E-08	1.32E-08	1.16E-10	5.53E-11	8.04E-10	8.15E-10	1.61E-09	1.63E-09
85	Cadmium		2.18E-10	7.65E-11	6.74E-13	3.20E-13	4.66E-12	4.73E-12	9.32E-12	9.45E-12
86	Chromium (III)		9.66E-10	3.39E-10	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		3.40E-11	1.19E-11	NA	NA	NA	NA	NA	NA
88	Copper		1.43E-09	5.02E-10	NA	NA	NA	NA	NA	NA
89	Iron		3.47E-05	1.22E-05	NA	NA	NA	NA	NA	NA
90	Lead		1.41E-09	4.93E-10	4.36E-12	2.07E-12	3.01E-11	3.06E-11	6.03E-11	6.11E-11
91	Mercury		1.41E-09	4.93E-10	4.36E-12	2.07E-12	3.01E-11	3.06E-11	6.03E-11	6.11E-11
92	Selenium		4.27E-09	1.50E-09	NA	NA	NA	NA	NA	NA
93	Silver		1.95E-11	6.84E-12	NA	NA	NA	NA	NA	NA
94	Zinc		1.12E-08	3.93E-09	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 yrs ACCUMULATION TIME AT
 0.2 M SOIL DEPTH OF MIXING SD
 0.1 M SOIL DEPTH OF MIXING SD
 1.43E+03 Kg/M3 SOIL BULK DENSITY BD
 1.00E+03 mg/g
 3.15E+07 sec/yr

Dilution Factor
 3.51E-01 INHALATION DFI
 Deposition Factor DF
 1.47E-03 DRY DDF
 3.09E-03 DRY/WET TDF

CO = D*AT*1000
 SD*BD
 AC = ER * DFI
 D = ER * x DF

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 20-Jun-91

A	B	C	M	N	O	P	Q	R
2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37
38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55
56	57	58	59	60				
BASE CASE	TABLE 1-B CATTLE FEED D	20-Jun-91 13:34:18 RES-A	TOTAL DEPOSITION RATE g/M2/yr	DRY DEPOSITION RATE g/M2/yr	CO AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	CO AVERAGE CALCULATED CONC IN SOIL .1M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .1M mg/Kg
12 ORGANICS								
Acetone	3.42E-10	NA	5.76E-11	NA	2.37E-09	2.40E-09	4.73E-09	4.80E-09
Acetonitrile	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	5.31E-16	8.94E-17	8.94E-17	8.94E-17	3.67E-15	3.73E-15	7.35E-15	7.45E-15
Aldrin	1.92E-11	3.24E-12	3.24E-12	3.24E-12	1.33E-10	1.35E-10	2.66E-10	2.70E-10
Aniline	1.19E-13	2.00E-14	2.00E-14	2.00E-14	8.22E-13	8.34E-13	1.64E-12	1.67E-12
Atrazine	8.76E-12	1.47E-12	1.47E-12	1.47E-12	6.06E-11	6.15E-11	1.21E-10	1.23E-10
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	4.26E-11	7.17E-12	7.17E-12	7.17E-12	2.95E-10	2.99E-10	5.89E-10	5.98E-10
Benzofuran	4.29E-12	7.22E-13	7.22E-13	7.22E-13	2.97E-11	3.01E-11	5.94E-11	6.02E-11
Benzoic Acid	9.36E-11	1.58E-11	1.58E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09
Benzonitrile	3.99E-14	6.72E-15	6.72E-15	6.72E-15	2.76E-13	2.80E-13	5.52E-13	5.60E-13
Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	2.36E-14	3.96E-15	3.96E-15	3.96E-15	1.63E-13	1.65E-13	3.26E-13	3.31E-13
Carbazole	1.92E-13	3.24E-14	3.24E-14	3.24E-14	1.33E-12	1.35E-12	2.66E-12	2.70E-12
Carbon Tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	1.10E-14	1.85E-15	1.85E-15	1.85E-15	7.62E-14	7.73E-14	1.52E-13	1.55E-13
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorobiphenyl	2.71E-14	4.57E-15	4.57E-15	4.57E-15	1.88E-13	1.90E-13	3.75E-13	3.81E-13
4,4'-Chlorobiphenyl	1.36E-15	2.30E-16	2.30E-16	2.30E-16	9.44E-15	9.58E-15	1.89E-14	1.92E-14
Chloroethane	9.72E-13	1.64E-13	1.64E-13	1.64E-13	6.72E-12	6.82E-12	1.34E-11	1.36E-11
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	8.55E-13	1.44E-13	1.44E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
Dichlorobenzenes (total)	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	9.84E-14	1.66E-14	1.66E-14	1.66E-14	6.81E-13	6.91E-13	1.36E-12	1.38E-12
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	9.75E-16	1.64E-16	1.64E-16	1.64E-16	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Dimethyldisulfide	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	2.58E-12	4.34E-13	4.34E-13	4.34E-13	1.78E-11	1.81E-11	3.57E-11	3.62E-11
Hydrazine	3.33E-09	5.61E-10	5.61E-10	5.61E-10	2.30E-08	2.34E-08	4.61E-08	4.67E-08
Lindane	4.53E-16	7.63E-17	7.63E-17	7.63E-17	3.13E-15	3.18E-15	6.27E-15	6.36E-15
Malathion	1.34E-15	2.25E-16	2.25E-16	2.25E-16	9.26E-15	9.39E-15	1.85E-14	1.88E-14
Methyl chloride	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	1.65E-13	2.78E-14	2.78E-14	2.78E-14	1.14E-12	1.16E-12	2.29E-12	2.32E-12
Methyl ethyl ketone	1.50E-13	2.53E-14	2.53E-14	2.53E-14	1.04E-12	1.05E-12	2.08E-12	2.11E-12
4-Methylphenol	1.05E-09	1.77E-10	1.77E-10	1.77E-10	7.26E-09	7.37E-09	1.45E-08	1.47E-08
Monomethyl hydrazine	1.77E-14	2.98E-15	2.98E-15	2.98E-15	1.22E-13	1.24E-13	2.45E-13	2.48E-13
Naphthalene	9.36E-11	1.58E-11	1.58E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09
Naphthalene carbonitrile	1.07E-12	1.80E-13	1.80E-13	1.80E-13	7.59E-12	7.49E-12	1.48E-11	1.50E-11
n-Nitrosodimethylamine	NA	NA	NA	NA	NA	NA	NA	NA
PAHs								
Acenaphthalene	4.26E-12	7.17E-13	7.17E-13	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11
Acenaphthene	4.26E-12	7.17E-13	7.17E-13	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11
Benzo(a)pyrene	8.55E-12	1.44E-12	1.44E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10

A	B	C	M	N	O	P	Q	R
			TABLE 1-B					
61	Chrysene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Fluorene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		1.03E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		NA	NA	NA	NA	NA	NA
71	Quinoline		9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		NA	NA	NA	NA	NA	NA
74	Toluene		NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		NA	NA	NA	NA	NA	NA
80	Vinyl chloride		NA	NA	NA	NA	NA	NA
81	Xylenes (total)		NA	NA	NA	NA	NA	NA
82								
83	INORGANICS							
84	Arsenic		1.13E-10	1.90E-11	7.80E-10	7.92E-10	1.56E-09	1.58E-09
85	Cadmium		6.54E-13	1.10E-13	4.52E-12	4.59E-12	9.05E-12	9.18E-12
86	Chromium (III)		NA	NA	NA	NA	NA	NA
87	Chromium (VI)		NA	NA	NA	NA	NA	NA
88	Copper		NA	NA	NA	NA	NA	NA
89	Iron		NA	NA	NA	NA	NA	NA
90	Lead		4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
91	Mercury		4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
92	Selenium		NA	NA	NA	NA	NA	NA
93	Silver		NA	NA	NA	NA	NA	NA
94	Zinc		NA	NA	NA	NA	NA	NA

2.0 yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/WET TDF

D*AT*1000

SD*BD
D = ER * X DF

A	B	C	TABLE 2										X	Y	Z	AA
61		Chrysene	2.86E-14	2.06E-16	3.85E-18	1.06E-18	1.74E-17	3.55E-19	6.40E-18	2.88E-14						
62		Dibenzo(a,h)anthracene	2.86E-13	6.17E-16	1.28E-16	2.67E-17	1.74E-16	7.95E-17	6.40E-17	2.87E-13						
63		Fluoranthene	2.86E-13	3.76E-15	1.72E-17	5.52E-18	1.74E-16	NA	6.40E-17	2.90E-13						
64		Fluorene	2.86E-14	4.57E-16	6.32E-19	2.30E-19	1.74E-17	2.92E-20	6.40E-18	2.91E-14						
65		Phenanthrene	1.11E-16	1.32E-18	3.05E-21	1.09E-21	6.78E-20	1.01E-19	2.49E-20	1.13E-16						
66		Pyrene	5.72E-13	7.06E-15	3.27E-17	1.06E-17	3.48E-16	1.60E-18	1.28E-16	5.79E-13						
67		Parathion	7.08E-17	9.39E-19	8.54E-22	3.23E-22	4.31E-20	3.17E-25	1.59E-20	7.18E-17						
68		Pentachlorobenzene	3.51E-14	1.01E-15	1.77E-18	5.83E-19	2.14E-17	NA	7.86E-18	3.61E-14						
69		Phenol	5.62E-16	9.61E-17	6.65E-22	2.60E-22	3.42E-19	NA	1.26E-19	6.58E-16						
70		Pyridine	3.13E-12	NA	NA	NA	NA	NA	NA	3.13E-12						
71		Quinoline	3.22E-14	1.82E-15	6.63E-20	2.59E-20	1.96E-17	6.35E-21	7.21E-18	3.40E-14						
72		Tetrachlorobenzene	1.72E-14	1.14E-15	3.77E-19	1.38E-19	1.05E-17	NA	3.86E-18	1.84E-14						
73		Tetrachloroethene	6.03E-16	NA	NA	NA	NA	NA	NA	6.03E-16						
74		Toluene	9.61E-15	NA	NA	NA	NA	NA	NA	9.61E-15						
75		Trichlorobenzene	8.73E-15	6.93E-17	1.26E-19	4.72E-20	5.32E-18	9.59E-21	1.96E-18	8.81E-15						
76		Trichloroethene	6.43E-15	NA	NA	NA	NA	NA	NA	6.43E-15						
77		Unsym. dimethyl hydrazine	1.38E-10	1.89E-09	3.84E-18	1.51E-18	8.43E-14	4.39E-20	3.10E-14	2.03E-09						
78		Vapona	2.80E-16	1.68E-17	3.13E-22	1.22E-22	1.70E-19	2.12E-25	6.27E-20	2.97E-16						
79		Vinyl acetate	3.97E-15	NA	NA	NA	NA	NA	NA	3.97E-15						
80		Vinyl chloride	3.69E-15	NA	NA	NA	NA	NA	NA	3.68E-15						
81		Xylenes (total)	6.86E-16	NA	NA	NA	NA	NA	NA	6.86E-16						
82																
83		INORGANICS														
84		Arsenic	3.77E-12	3.24E-15	2.02E-15	2.65E-17	2.30E-15	4.36E-15	8.45E-17	3.78E-12						
85		Cadmium	2.19E-14	5.96E-17	4.18E-18	1.83E-19	1.33E-17	NA	4.90E-19	2.19E-14						
86		Chromium (III)	9.69E-14	NA	NA	NA	NA	NA	NA	9.69E-14						
87		Chromium (VI)	3.41E-15	NA	NA	NA	NA	NA	NA	3.41E-15						
88		Copper	1.43E-13	NA	NA	NA	NA	NA	NA	1.44E-13						
89		Iron	3.48E-09	NA	NA	NA	NA	NA	NA	3.48E-09						
90		Lead	1.41E-13	NA	NA	NA	NA	NA	NA	1.41E-13						
91		Mercury	1.41E-13	5.03E-16	1.06E-17	7.98E-16	8.61E-17	NA	3.17E-18	1.43E-13						
92		Selenium	4.28E-13	NA	NA	NA	NA	NA	NA	4.28E-13						
93		Silver	1.96E-15	NA	NA	NA	NA	NA	NA	1.96E-15						
94		Zinc	1.12E-12	NA	NA	NA	NA	2.03E-15	NA	1.13E-12						
95																
96																
97																
98																
99																
100																
101																
102																
103																
104																

br 20 M3/day
 bw 70 Kg
 ef 365 days/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf
 D*AT*1000
 SD*BD
 AC = ER * DF1
 D = ER * X DF

TABLE 3 ADULT TOTAL EXPOSURE - MAXIMUM										
A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
1	2	3	4	5	6	7	8	9	10	11
BASE CASE	18-Jun-91 14:11:45 RES-A		INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)
12	ORGANICS									
13	Acetone		1.26E-14	NA	NA	NA	NA	NA	NA	1.26E-14
14	Acetonitrile		1.14E-11	1.23E-11	2.42E-18	9.45E-19	7.06E-15	7.76E-21	2.60E-15	2.37E-11
15	Acrylonitrile		4.86E-12	NA	NA	NA	NA	NA	NA	4.86E-12
16	Aldrin		1.78E-17	4.59E-18	1.45E-18	1.64E-19	1.10E-20	2.81E-27	4.03E-21	2.40E-17
17	Aniline		6.43E-13	8.93E-14	4.65E-19	1.79E-19	3.97E-16	2.33E-19	1.46E-16	7.33E-13
18	Atrazine		3.97E-15	2.19E-16	2.16E-20	6.77E-21	2.45E-18	0.00E+00	9.02E-15	4.19E-15
19	Benzaldehyde		2.93E-13	2.39E-14	3.87E-19	1.44E-19	1.81E-16	2.51E-20	6.65E-17	3.17E-13
20	Benzene		3.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
21	Benzofuran		1.42E-12	7.89E-14	7.66E-18	2.40E-18	8.80E-16	5.53E-19	3.24E-16	1.50E-12
22	Benzoic Acid		1.43E-13	8.88E-15	2.90E-19	1.04E-19	8.86E-17	2.20E-20	3.26E-17	1.52E-13
23	Benzonitrile		3.13E-12	2.39E-13	4.50E-18	1.66E-18	1.93E-15	2.99E-19	7.11E-16	3.37E-12
24	Benzothiazole		1.33E-15	7.62E-17	3.16E-21	1.12E-21	8.24E-19	2.51E-24	3.03E-19	1.41E-15
25	Biphenyl		1.43E-12	NA	NA	NA	NA	NA	NA	1.43E-12
26	Bis(2-ethylhexyl)phthalate		7.87E-16	1.59E-16	1.37E-15	1.54E-16	4.86E-19	3.25E-24	1.79E-19	2.47E-15
27	Carbazole		6.43E-15	2.84E-16	8.58E-20	2.23E-20	3.97E-18	3.31E-21	1.46E-18	6.72E-15
28	Carbon Tetrachloride		1.87E-14	NA	NA	NA	NA	NA	1.87E-14	1.87E-14
29	4-Chloroaniline		3.68E-16	2.22E-17	7.12E-22	2.57E-22	2.27E-19	9.45E-22	8.36E-20	3.91E-16
30	Chlorobenzene		8.85E-16	NA	NA	NA	NA	NA	NA	8.85E-16
31	4-Chlorobiphenyl		9.07E-16	3.08E-17	2.63E-19	3.80E-20	5.60E-19	3.39E-22	2.06E-19	9.38E-16
32	4,4'-Chlorobiphenyl		4.56E-17	1.46E-18	5.91E-20	7.45E-21	2.82E-20	5.71E-24	1.04E-20	4.72E-17
33	Chloroethane		3.25E-14	2.66E-15	4.34E-20	1.61E-20	2.01E-17	1.91E-23	7.38E-18	3.52E-14
34	Chloroform		1.58E-13	NA	NA	NA	NA	NA	NA	1.58E-13
35	Dibenzofuran		2.86E-14	1.07E-15	1.67E-18	3.13E-19	1.77E-17	2.19E-20	6.49E-18	2.97E-14
36	Dichlorobenzenes (total)		3.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
37	1,4-Dichlorobenzene		2.33E-16	NA	NA	NA	NA	NA	NA	2.33E-16
38	1,1-Dichloroethane		1.05E-14	NA	NA	NA	NA	NA	NA	1.05E-14
39	1,2-Dichloroethane		3.29E-15	6.57E-16	4.34E-21	1.61E-21	2.03E-18	5.73E-23	7.47E-19	3.95E-15
40	1,1-Dichloroethene		5.64E-15	NA	NA	NA	NA	NA	NA	5.64E-15
41	1,2-Dichloroethene		4.87E-15	NA	NA	NA	NA	NA	NA	4.87E-15
42	1,2-Dichloropropane		2.09E-15	NA	NA	NA	NA	NA	NA	2.09E-15
43	Dieldrin		3.26E-17	5.17E-17	1.71E-19	2.02E-20	2.01E-20	1.08E-24	7.41E-21	8.45E-17
44	Dimethyldisulfide		8.96E-15	NA	NA	NA	NA	NA	NA	8.96E-15
45	Hexachlorobenzene		8.61E-14	3.56E-15	8.73E-17	1.12E-17	5.32E-17	4.30E-19	1.96E-17	8.99E-14
46	Hydrazine		1.11E-10	3.45E-09	1.65E-18	6.49E-19	6.88E-14	3.52E-20	2.53E-14	3.57E-09
47	Lindane		1.51E-17	7.13E-19	2.05E-22	5.32E-23	9.36E-21	4.73E-26	3.44E-21	1.59E-17
48	Malathion		4.47E-17	1.70E-18	3.26E-22	9.64E-23	2.76E-20	0.00E+00	1.02E-20	4.65E-17
49	Methyl chloride		4.37E-15	NA	NA	NA	NA	NA	NA	4.37E-15
50	Methylene chloride		2.64E-13	NA	NA	NA	NA	NA	NA	2.64E-13
51	Methyl ethyl ketone		5.53E-15	2.93E-15	2.11E-21	8.18E-22	3.41E-18	0.00E+00	1.26E-18	8.46E-15
52	4-Methylphenol		5.01E-15	5.16E-16	1.10E-20	3.91E-21	3.10E-18	2.71E-23	1.14E-18	5.53E-15
53	Monomethyl hydrazine		3.51E-11	7.49E-10	5.22E-19	2.05E-19	2.17E-14	1.12E-20	7.98E-15	7.84E-10
54	Naphthalene		5.92E-16	3.02E-17	8.70E-21	2.21E-21	3.66E-19	1.48E-19	1.34E-19	6.23E-16
55	Naphthalene carbonitrile		3.13E-12	1.59E-13	4.60E-17	1.17E-17	1.93E-15	3.42E-18	7.11E-16	3.29E-12
56	n-Nitrosodimethylamine		3.57E-14	4.65E-13	5.43E-21	2.12E-21	2.21E-17	0.00E+00	8.11E-18	5.01E-13
57	PAHS									
58	Acenaphthalene		1.42E-13	7.51E-15	7.55E-18	1.44E-18	8.80E-17	1.05E-19	3.24E-17	1.50E-13
59	Acenaphthene		1.42E-13	5.50E-15	5.68E-18	1.15E-18	8.80E-17	4.07E-20	3.24E-17	1.48E-13
60	Benzo(a)pyrene		2.86E-13	7.83E-15	2.47E-15	2.89E-16	1.77E-16	1.40E-19	6.49E-17	2.97E-13

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
61	Chrysene		2.86E-14	9.48E-16	5.93E-17	7.28E-18	1.77E-17	3.55E-19	6.49E-18	2.96E-14
62	Dibenzo(a,h)anthracene		2.86E-13	8.01E-15	2.97E-15	3.45E-16	1.77E-16	7.95E-17	6.49E-17	2.97E-13
63	Fluoranthene		2.86E-13	1.12E-14	1.67E-16	2.23E-17	1.77E-17	NA	6.49E-17	2.97E-13
64	Fluorene		2.86E-14	1.20E-15	2.80E-18	4.75E-19	1.77E-17	2.92E-20	6.49E-18	2.98E-14
65	Phenanthrene		1.11E-16	4.22E-18	1.61E-20	2.56E-21	6.88E-20	1.01E-19	2.53E-20	1.16E-16
66	Pyrene		5.72E-13	2.19E-14	3.05E-16	4.12E-17	3.53E-16	1.60E-18	1.30E-16	5.94E-13
67	Parathion		7.08E-17	2.78E-18	2.30E-21	4.89E-22	4.37E-20	3.17E-25	1.61E-20	7.36E-17
68	Pentachlorobenzene		3.51E-14	1.93E-15	1.51E-17	2.08E-18	2.17E-17	NA	7.98E-18	3.71E-14
69	Phenol		5.62E-16	1.12E-16	7.26E-22	2.70E-22	3.47E-19	NA	1.28E-19	6.74E-16
70	Pyridine		3.13E-12	NA	NA	NA	NA	NA	NA	3.13E-12
71	Quinoline		3.22E-14	2.68E-15	7.82E-20	2.75E-20	1.99E-17	6.35E-21	7.32E-18	3.49E-14
72	Tetrachlorobenzene		1.72E-14	1.60E-15	1.65E-18	2.82E-19	1.07E-17	NA	3.92E-18	1.89E-14
73	Tetrachloroethene		6.03E-16	NA	NA	NA	NA	NA	NA	6.03E-16
74	Toluene		9.61E-15	NA	NA	NA	NA	NA	NA	9.61E-15
75	Trichlorobenzene		8.73E-15	2.96E-16	3.90E-19	7.72E-20	5.40E-18	9.59E-21	1.98E-18	9.04E-15
76	Trichloroethene		6.43E-15	NA	NA	NA	NA	NA	NA	6.43E-15
77	Unsym. dimethyl hydrazine		1.38E-10	1.93E-09	3.90E-18	1.53E-18	8.55E-14	4.39E-20	3.14E-14	2.06E-09
78	Vapona		2.80E-16	2.43E-17	3.39E-22	1.27E-22	1.73E-19	2.12E-25	6.36E-20	3.04E-16
79	Vinyl acetate		3.97E-15	NA	NA	NA	NA	NA	NA	3.97E-15
80	Vinyl chloride		3.66E-15	NA	NA	NA	NA	NA	NA	3.66E-15
81	Xylenes (total)		6.86E-16	NA	NA	NA	NA	NA	NA	6.86E-16
82										
83	INORGANICS									
84	Arsenic		3.77E-12	1.01E-13	1.08E-14	1.33E-16	2.33E-15	4.36E-15	8.57E-17	3.89E-12
85	Cadmium		2.19E-14	6.26E-16	1.27E-17	3.54E-19	1.35E-17	NA	4.97E-19	2.25E-14
86	Chromium (III)		9.69E-14	NA	NA	NA	NA	NA	NA	9.69E-14
87	Chromium (VI)		3.41E-15	NA	NA	NA	NA	NA	NA	3.41E-15
88	Copper		1.43E-13	NA	NA	NA	NA	5.29E-16	NA	1.44E-13
89	Iron		3.48E-09	NA	NA	NA	NA	NA	NA	3.48E-09
90	Lead		1.41E-13	NA	NA	NA	NA	NA	NA	1.41E-13
91	Mercury		1.41E-13	4.17E-15	3.54E-17	1.31E-15	8.74E-17	NA	3.21E-18	1.47E-13
92	Selenium		4.28E-13	NA	NA	NA	NA	NA	NA	4.28E-13
93	Silver		1.96E-15	NA	NA	NA	NA	NA	NA	1.96E-15
94	Zinc		1.12E-12	NA	NA	NA	NA	2.03E-15	NA	1.13E-12
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 20 M3/day
 bw 70 kg
 ef 365 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2	TABLE 4									
3	CHILD									
4	TOTAL									
5	EXPOSURE									
6	- AVERAGE									
7	BASE CASE									
8										
9										
10										
11										
12	ORGANICS									
13	Acetone		2.85E-14	NA	1.37E-17	NA	6.29E-14	NA	NA	2.85E-14
14	Acetonitrile		2.58E-11	2.11E-11	1.37E-17	2.32E-18	NA	1.75E-20	2.14E-14	4.70E-11
15	Acrylonitrile		1.10E-11	NA	NA	NA	NA	NA	NA	1.10E-11
16	Aldrin		4.01E-17	6.10E-18	2.76E-19	1.79E-20	9.76E-20	6.34E-27	3.33E-20	4.66E-17
17	Aniline		1.45E-12	1.44E-13	2.56E-18	4.33E-19	3.54E-15	5.27E-19	1.20E-15	1.60E-12
18	Atrazine		8.97E-15	1.94E-16	8.92E-20	1.50E-20	2.18E-17	0.00E+00	7.44E-18	9.19E-15
19	Benzaldehyde		6.61E-13	3.18E-14	2.04E-18	3.45E-19	1.61E-15	5.67E-20	5.49E-16	6.95E-13
20	Benzene		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
21	Benzofuran		3.22E-12	7.02E-14	3.17E-17	5.32E-18	7.83E-15	1.25E-18	2.67E-15	3.30E-12
22	Benzoic Acid		3.24E-13	9.89E-15	1.46E-18	2.47E-19	7.89E-16	4.96E-20	2.69E-16	3.35E-13
23	Benzonitrile		7.07E-12	3.08E-13	2.36E-17	3.99E-18	1.72E-14	6.74E-19	5.86E-15	7.40E-12
24	Benzothiazole		3.01E-15	7.91E-17	1.56E-20	2.63E-21	7.34E-18	5.67E-24	2.50E-18	3.10E-15
25	Biphenyl		3.24E-12	NA	NA	NA	NA	NA	NA	3.24E-12
26	Bis(2-ethylhexyl)phthalate		1.78E-15	2.05E-16	2.32E-16	1.20E-17	4.33E-18	7.34E-24	1.47E-18	2.23E-15
27	Carbazole		1.45E-14	1.91E-16	2.64E-19	4.39E-20	3.54E-17	7.46E-21	1.20E-17	1.48E-14
28	Carbon Tetrachloride		4.21E-14	NA	NA	NA	NA	NA	NA	4.21E-14
29	4-Chloroaniline		8.31E-16	2.48E-17	3.61E-21	6.09E-22	2.02E-18	2.13E-21	6.89E-19	8.59E-16
30	Chlorobenzene		2.00E-15	NA	NA	NA	NA	NA	NA	2.00E-15
31	4-Chlorobiphenyl		2.05E-15	1.14E-17	2.11E-19	3.10E-20	4.99E-18	7.66E-22	1.70E-18	2.07E-15
32	4,4'-Chlorobiphenyl		1.03E-16	4.38E-19	2.60E-20	3.28E-21	2.51E-19	1.29E-23	8.55E-20	1.04E-16
33	Chloroethane		7.34E-14	3.53E-15	2.29E-19	3.87E-20	1.79E-16	4.32E-23	6.09E-17	7.71E-14
34	Chloroform		3.58E-13	NA	NA	NA	NA	NA	NA	3.58E-13
35	Dibenzofuran		6.45E-14	5.14E-16	2.76E-18	4.43E-19	1.57E-16	4.94E-20	5.35E-17	6.53E-14
36	Dichlorobenzenes (total)		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
37	1,4-Dichlorobenzene		5.25E-16	NA	NA	NA	NA	NA	NA	5.25E-16
38	1,1-Dichloroethane		2.38E-14	NA	NA	NA	NA	NA	NA	2.38E-14
39	1,2-Dichloroethane		7.43E-15	9.32E-16	2.29E-20	3.88E-21	1.81E-17	1.29E-22	6.16E-18	8.38E-15
40	1,1-Dichloroethene		1.27E-14	NA	NA	NA	NA	NA	NA	1.27E-14
41	1,2-Dichloroethene		1.10E-14	NA	NA	NA	NA	NA	NA	1.10E-14
42	1,2-Dichloropropane		4.71E-15	NA	NA	NA	NA	NA	NA	4.71E-15
43	Dieldrin		7.36E-17	7.51E-17	4.94E-20	5.02E-21	1.79E-19	2.44E-24	6.11E-20	1.49E-16
44	Dimethyldisulfide		2.02E-14	NA	NA	NA	NA	NA	NA	2.02E-14
45	Hexachlorobenzene		1.95E-13	2.01E-15	4.20E-17	5.47E-18	4.74E-16	9.71E-19	1.61E-16	1.97E-13
46	Hydrazine		2.51E-10	6.38E-09	9.42E-18	1.59E-18	6.12E-13	7.96E-20	2.09E-13	6.63E-09
47	Lindane		3.42E-17	5.14E-19	6.29E-22	1.05E-22	8.33E-20	1.07E-25	2.84E-17	3.48E-17
48	Malathion		1.01E-16	9.90E-19	1.24E-21	2.07E-22	2.46E-19	0.00E+00	8.38E-20	1.02E-16
49	Methyl chloride		9.87E-15	NA	NA	NA	NA	NA	NA	9.87E-15
50	Methylene chloride		5.96E-13	4.85E-15	1.18E-20	2.00E-21	3.04E-17	0.00E+00	1.04E-17	5.96E-13
51	Methyl ethyl ketone		1.25E-14	6.42E-16	5.47E-20	9.23E-21	2.76E-17	6.13E-23	9.39E-18	1.74E-14
52	4-Methylphenol		1.13E-11	1.51E-09	2.97E-18	5.03E-19	2.70E-17	2.52E-23	6.58E-14	1.20E-14
53	Monomethyl hydrazine		7.93E-11	2.34E-17	2.58E-20	4.29E-21	3.25E-18	3.35E-19	1.11E-18	1.59E-09
54	Naphthalene		1.34E-15	1.24E-13	1.37E-16	2.27E-17	7.22E-14	7.22E-18	5.86E-15	1.36E-15
55	Naphthalene carbonitrile		7.07E-12	7.02E-13	3.08E-20	5.21E-21	1.96E-16	0.00E+00	6.69E-17	7.21E-12
56	n-Nitrosodimethylamine		8.06E-14	NA	NA	NA	NA	NA	NA	7.83E-13
57	PAHs									
58	Acenaphthalene		3.22E-13	5.81E-15	1.30E-17	2.10E-18	7.83E-16	2.37E-19	2.67E-16	3.28E-13
59	Acenaphthene		3.22E-13	2.87E-15	1.11E-17	1.81E-18	7.83E-16	9.18E-20	2.67E-16	3.25E-13
60	Benzo(a)pyrene		6.45E-13	7.38E-16	6.38E-16	5.94E-17	1.57E-15	3.17E-19	5.35E-16	6.49E-13

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
61	Chrysene		6.45E-14	3.19E-16	2.23E-17	2.63E-18	1.57E-16	8.01E-19	5.35E-17	6.51E-14
62	Dibenzo(a,h)anthracene		6.45E-13	1.01E-15	7.38E-16	6.66E-17	1.57E-15	1.79E-16	5.35E-16	6.49E-13
63	Fluoranthene		6.45E-13	5.77E-15	9.94E-17	1.38E-17	1.57E-15	NA	5.35E-17	6.53E-13
64	Fluorene		6.45E-14	7.08E-16	3.65E-18	5.74E-19	1.57E-16	6.60E-20	5.35E-17	6.55E-14
65	Phenanthrene		2.51E-16	2.06E-18	1.76E-20	2.71E-21	6.12E-19	2.27E-19	2.09E-19	2.54E-16
66	Pyrene		1.29E-12	1.08E-14	1.89E-16	2.64E-17	3.14E-15	3.62E-18	1.07E-15	1.31E-12
67	Parathion		1.60E-16	1.51E-18	4.93E-21	8.06E-22	3.89E-19	7.17E-25	1.33E-19	1.62E-16
68	Pentachlorobenzene		7.93E-14	1.53E-15	1.02E-17	1.45E-18	1.93E-16	NA	6.58E-17	8.11E-14
69	Phenol		1.27E-15	1.59E-16	3.84E-21	6.50E-22	3.09E-18	NA	1.05E-18	1.43E-15
70	Pyridine		7.07E-12	NA	NA	NA	NA	NA	NA	7.07E-12
71	Quinoline		7.27E-14	3.13E-15	3.83E-19	6.47E-20	1.77E-16	1.43E-20	6.03E-17	7.61E-14
72	Tetrachlorobenzene		3.89E-14	1.72E-15	2.18E-18	3.43E-19	9.49E-17	NA	3.23E-17	4.08E-14
73	Tetrachloroethene		1.36E-15	NA	NA	NA	NA	NA	NA	1.36E-15
74	Toluene		2.17E-14	NA	NA	NA	NA	NA	NA	2.17E-14
75	Trichlorobenzene		1.97E-14	1.14E-16	7.27E-19	1.18E-19	4.80E-17	2.17E-20	1.64E-17	1.99E-14
76	Trichloroethene		1.45E-14	NA	NA	NA	NA	NA	NA	1.45E-14
77	Unsym. dimethyl hydrazine		3.13E-10	3.50E-09	2.22E-17	3.75E-18	7.61E-13	9.92E-20	2.59E-13	3.81E-09
78	Vapona		6.32E-16	3.34E-17	1.81E-21	3.05E-22	1.54E-18	4.78E-25	5.24E-19	6.67E-16
79	Vinyl acetate		8.97E-15	NA	NA	NA	NA	NA	NA	8.97E-15
80	Vinyl chloride		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
81	Xylenes (total)		1.55E-15	NA	NA	NA	NA	NA	NA	1.55E-15
82										
83	INORGANICS									
84	Arsenic		8.51E-12	5.84E-15	1.17E-14	6.61E-17	2.07E-14	9.84E-15	7.06E-16	8.56E-12
85	Cadmium		4.94E-14	1.02E-16	2.41E-17	4.55E-19	1.20E-16	NA	4.10E-18	4.96E-14
86	Chromium (III)		2.19E-13	NA	NA	NA	NA	NA	NA	2.19E-13
87	Chromium (VI)		7.70E-15	NA	NA	NA	NA	NA	NA	7.70E-15
88	Copper		3.24E-13	NA	NA	NA	NA	1.20E-15	NA	3.25E-13
89	Iron		7.86E-09	NA	NA	NA	NA	NA	NA	7.86E-09
90	Lead		3.19E-13	NA	NA	NA	NA	NA	NA	3.19E-13
91	Mercury		3.19E-13	8.22E-16	6.15E-17	1.99E-15	7.78E-16	NA	2.65E-17	3.23E-13
92	Selenium		9.67E-13	NA	NA	NA	NA	NA	NA	9.67E-13
93	Silver		4.42E-15	NA	NA	NA	NA	NA	NA	4.42E-15
94	Zinc		2.54E-12	NA	NA	NA	NA	4.58E-15	NA	2.54E-12
95										
96										
97										
98										
99										
100										
101										
102										
103										

br
bw
um

10 M3/day
15.5 Kg
1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2	3		TABLE 5							
4	5		CHILD TOTAL EXPOSURE - MAXIMUM							
6	7									
8	9									
10	11									
12	13									
14	15									
16	17									
18	19									
20	21									
22	23									
24	25									
26	27									
28	29									
30	31									
32	33									
34	35									
36	37									
38	39									
40	41									
42	43									
44	45									
46	47									
48	49									
50	51									
52	53									
54	55									
56	57									
58	59									
60										
BASE CASE										
18-Jun-91 14:11:45 RES-A			INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)
13	Acetone		2.85E-14	NA	NA	NA	NA	NA	NA	2.85E-14
14	Acetonitrile		2.58E-11	2.19E-11	1.40E-17	2.36E-18	6.38E-14	1.75E-20	2.17E-14	4.79E-11
15	Acrylonitrile		1.10E-11	NA	NA	NA	NA	NA	NA	1.10E-11
16	Aldrin		4.01E-17	7.04E-18	8.37E-18	4.10E-19	9.90E-20	6.34E-27	3.37E-20	5.60E-17
17	Aniline		1.45E-12	1.77E-13	2.69E-18	4.43E-19	3.59E-15	5.27E-19	1.22E-15	1.63E-12
18	Atrazine		8.97E-15	3.87E-16	1.25E-19	1.69E-20	2.22E-17	0.00E+00	7.59E-18	9.38E-15
19	Benzaldehyde		6.61E-13	4.63E-14	2.23E-18	3.58E-19	1.63E-15	5.67E-20	5.57E-16	7.10E-13
20	Benzene		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
21	Benzofuran		3.22E-12	1.39E-13	4.42E-17	5.98E-18	7.95E-15	1.25E-18	2.71E-15	3.37E-12
22	Benzoic Acid		3.24E-13	1.69E-14	1.67E-18	2.60E-19	8.00E-16	4.96E-20	2.73E-16	3.42E-13
23	Benzonitrile		7.07E-12	4.63E-13	2.60E-17	4.15E-18	1.75E-14	6.74E-19	5.95E-15	7.55E-12
24	Benzothiazole		3.01E-15	1.44E-16	1.83E-20	2.79E-21	7.44E-18	5.67E-24	2.53E-18	3.17E-15
25	Biphenyl		3.24E-12	NA	NA	NA	NA	NA	NA	3.24E-12
26	Bis(2-ethylhexyl)phthalate		1.78E-15	2.46E-16	7.91E-15	3.83E-16	4.39E-18	7.34E-24	1.50E-18	1.03E-14
27	Carbazole		1.45E-14	5.02E-16	4.96E-19	5.56E-20	3.59E-17	7.46E-21	1.22E-17	1.51E-14
28	Carbon Tetrachloride		4.21E-14	NA	NA	NA	NA	NA	NA	4.21E-14
29	4-Chloroaniline		8.31E-16	4.28E-17	4.11E-21	6.40E-22	2.05E-18	2.13E-21	6.99E-19	8.77E-16
30	Chlorobenzene		2.00E-15	NA	NA	NA	NA	NA	NA	2.00E-15
31	4-Chlorobiphenyl		2.05E-15	5.50E-17	1.52E-18	9.48E-20	5.06E-18	7.66E-22	1.72E-18	2.11E-15
32	4,4'-Chlorobiphenyl		1.03E-16	2.63E-18	3.41E-19	1.86E-20	2.55E-19	1.29E-23	8.67E-20	1.06E-16
33	Chloroethane		7.34E-14	5.13E-15	2.50E-19	4.01E-20	1.81E-16	4.32E-23	6.18E-17	7.87E-14
34	Chloroform		3.58E-13	NA	NA	NA	NA	NA	NA	3.58E-13
35	Dibenzofuran		6.45E-14	1.89E-15	9.63E-18	7.80E-19	1.59E-16	4.94E-20	5.43E-17	6.67E-14
36	Dichlorobenzenes (total)		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
37	1,4-Dichlorobenzene		5.25E-16	NA	NA	NA	NA	NA	NA	5.25E-16
38	1,1-Dichloroethane		2.38E-14	NA	NA	NA	NA	NA	NA	2.38E-14
39	1,2-Dichloroethane		7.43E-15	1.10E-15	2.51E-20	4.02E-21	1.84E-17	1.29E-22	6.25E-18	8.55E-15
40	1,1-Dichloroethene		1.27E-14	NA	NA	NA	NA	NA	NA	1.27E-14
41	1,2-Dichloroethene		1.10E-14	NA	NA	NA	NA	NA	NA	1.10E-14
42	1,2-Dichloropropane		4.71E-15	NA	NA	NA	NA	NA	NA	4.71E-15
43	Dieldrin		7.36E-17	7.77E-17	9.88E-19	5.05E-20	1.82E-19	2.44E-24	6.19E-20	1.53E-16
44	Dimethyldisulfide		2.02E-14	NA	NA	NA	NA	NA	NA	2.02E-14
45	Hexachlorobenzene		1.95E-13	6.17E-15	5.04E-16	2.79E-17	4.81E-16	9.71E-19	1.64E-16	2.02E-13
46	Hydrazine		2.51E-10	6.48E-09	9.55E-18	1.62E-18	6.21E-13	7.96E-20	2.12E-13	6.73E-09
47	Lindane		3.42E-17	1.25E-18	1.19E-21	1.33E-22	8.45E-13	1.07E-25	2.88E-20	3.56E-17
48	Malathion		1.01E-16	3.15E-18	1.88E-21	2.41E-22	2.50E-19	0.00E+00	8.50E-20	1.04E-16
49	Methyl chloride		9.87E-15	NA	NA	NA	NA	NA	NA	9.87E-15
50	Methylene chloride		5.96E-13	5.18E-15	1.22E-20	2.04E-21	3.08E-17	0.00E+00	1.05E-17	5.96E-13
51	Methyl ethyl ketone		1.25E-14	8.92E-16	6.34E-20	9.75E-21	2.80E-17	6.13E-23	1.05E-17	1.77E-14
52	4-Methylphenol		1.33E-14	1.53E-09	3.01E-18	5.10E-19	1.96E-13	2.52E-20	9.53E-18	1.23E-14
53	Monomethyl hydrazine		7.93E-11	5.21E-17	5.02E-20	5.51E-21	3.30E-18	3.35E-19	6.67E-14	1.61E-09
54	Naphthalene		1.34E-15	7.07E-12	2.66E-16	2.92E-17	1.75E-14	7.72E-18	1.12E-18	1.39E-15
55	Naphthalene carbonitrile		8.06E-14	7.14E-13	3.13E-20	5.29E-21	1.99E-16	0.00E+00	6.78E-17	7.36E-12
56	n-Nitrosodimethylamine									7.95E-13
57	PAHS									
58	Acenaphthalene		3.22E-13	1.27E-14	4.36E-17	3.60E-18	7.95E-16	2.37E-19	2.71E-16	3.35E-13
59	Acenaphthene		3.22E-13	9.74E-15	3.28E-17	2.87E-16	7.95E-16	9.18E-20	2.71E-16	3.32E-13
60	Benzo(a)pyrene		6.43E-13	1.44E-14	1.43E-14	7.21E-16	1.59E-15	3.17E-19	5.43E-16	6.77E-13

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2			TABLE 5							
61	Chrysene		6.45E-14	1.69E-15	3.42E-16	1.81E-17	1.59E-16	8.01E-19	5.43E-17	6.68E-14
62	Dibenzo(a,h)anthracene		6.45E-13	1.47E-14	1.72E-14	8.61E-16	1.59E-15	1.79E-16	5.43E-16	6.80E-13
63	Fluoranthene		6.45E-13	1.95E-14	9.62E-16	5.56E-17	1.59E-15	NA	5.43E-16	6.68E-13
64	Fluorene		6.45E-14	2.09E-15	1.61E-17	1.18E-18	1.59E-16	6.60E-20	5.43E-17	6.69E-14
65	Phenanthrene		2.51E-16	7.42E-18	9.29E-20	6.38E-21	6.21E-19	2.27E-19	2.12E-19	2.60E-16
66	Pyrene		1.29E-12	3.84E-14	1.76E-15	1.03E-16	3.19E-15	3.62E-18	1.09E-15	1.34E-12
67	Parathion		1.60E-16	4.92E-18	1.33E-20	1.22E-21	3.95E-19	7.17E-25	1.35E-19	1.65E-16
68	Pentachlorobenzene		7.93E-14	3.23E-15	8.69E-17	5.18E-18	1.96E-16	NA	6.67E-17	8.28E-14
69	Phenol		1.27E-15	1.88E-16	4.19E-21	6.73E-22	3.13E-18	NA	1.07E-18	1.46E-15
70	Pyridine		7.07E-12	NA	NA	NA	NA	NA	NA	7.07E-12
71	Quinoline		7.27E-14	4.72E-15	4.51E-19	6.86E-20	1.80E-16	1.43E-20	6.12E-17	7.77E-14
72	Tetrachlorobenzene		3.89E-14	2.57E-15	9.55E-18	7.03E-19	9.62E-17	NA	3.28E-17	4.17E-14
73	Tetrachloroethene		1.36E-15	NA	NA	NA	NA	NA	NA	1.36E-15
74	Toluene		2.17E-14	NA	NA	NA	NA	NA	NA	2.17E-14
75	Trichlorobenzene		1.97E-14	5.34E-16	2.25E-18	1.93E-19	4.87E-17	2.17E-20	1.66E-17	2.03E-14
76	Trichloroethene		1.45E-14	NA	NA	NA	NA	NA	NA	1.45E-14
77	Unsym. dimethyl hydrazine		3.13E-10	3.55E-09	2.25E-17	3.81E-18	7.72E-13	9.92E-20	2.63E-13	3.87E-09
78	Vapona		6.32E-16	4.73E-17	1.96E-21	3.16E-22	1.56E-18	4.78E-25	5.32E-19	6.81E-16
79	Vinyl acetate		8.97E-15	NA	NA	NA	NA	NA	NA	8.97E-15
80	Vinyl chloride		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
81	Xylenes (total)		1.55E-15	NA	NA	NA	NA	NA	NA	1.55E-15
82										
83	INORGANICS									
84	Arsenic		8.51E-12	1.87E-13	6.24E-14	3.31E-16	2.10E-14	9.84E-15	7.17E-16	8.80E-12
85	Cadmium		4.94E-14	1.15E-15	7.33E-17	8.82E-19	1.22E-16	NA	4.15E-18	5.07E-14
86	Chromium (III)		2.19E-13	NA	NA	NA	NA	NA	NA	2.19E-13
87	Chromium (VI)		7.70E-15	NA	NA	NA	NA	NA	NA	7.70E-15
88	Copper		3.24E-13	NA	NA	NA	NA	1.20E-15	NA	3.25E-13
89	Iron		7.86E-09	NA	NA	NA	NA	NA	NA	7.86E-09
90	Lead		3.19E-13	NA	NA	NA	NA	NA	NA	3.19E-13
91	Mercury		3.19E-13	7.61E-15	2.04E-16	3.26E-15	7.89E-16	NA	2.69E-17	3.31E-13
92	Selenium		9.67E-13	NA	NA	NA	NA	NA	NA	9.67E-13
93	Silver		4.42E-15	NA	NA	NA	NA	NA	NA	4.42E-15
94	Zinc		2.54E-12	NA	NA	NA	NA	4.58E-15	NA	2.54E-12
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair*br/bw/ugmg

			TABLE 6			
			INFANT TOTAL EXPOSURE			
A	B	C	BH	B1	BJ	
BASE CASE						
18-Jun-91 14:11:45 RES-A			INHALATION (mg/kg/day)	BREAST MILK (mg/kg/day)	TOTAL (mg/kg/day)	
10						
11						
12	ORGANICS					
13	Acetone		1.87E-14	3.24E-16	1.90E-14	
14	Acetonitrile		1.69E-11	8.64E-11	1.03E-10	
15	Acrylonitrile		7.19E-12	2.22E-14	7.21E-12	
16	Aldrin		2.62E-17	8.72E-17	1.13E-16	
17	Aniline		9.50E-13	2.67E-12	3.62E-12	
18	Atrazine		5.87E-15	1.53E-14	2.11E-14	
19	Benzaldehyde		4.33E-13	1.15E-12	1.59E-12	
20	Benzene		5.44E-15	6.29E-18	5.45E-15	
21	Benzo(a)pyrene		2.10E-12	5.47E-12	7.58E-12	
22	Benzoic Acid		2.12E-13	5.55E-13	7.67E-13	
23	Benzonitrile		4.62E-12	1.23E-11	1.69E-11	
24	Benzothiazole		1.97E-15	5.14E-15	7.11E-15	
25	Biphenyl		2.12E-12	3.68E-14	2.16E-12	
26	Bis(2-ethylhexyl)phthalate		1.16E-15	8.99E-15	1.02E-14	
27	Carbazole		9.50E-15	2.44E-14	3.39E-14	
28	Carbon Tetrachloride		2.76E-14	4.79E-16	2.80E-14	
29	4-Chloroaniline		5.44E-16	1.42E-15	1.97E-15	
30	Chlorobenzene		1.31E-15	2.27E-17	1.33E-15	
31	4-Chlorobiphenyl		1.34E-15	3.42E-15	4.76E-15	
32	4,4'-Chlorobiphenyl		6.74E-17	1.72E-16	2.39E-16	
33	Chloroethane		4.80E-14	1.28E-13	1.76E-13	
34	Chloroform		2.34E-13	4.06E-15	2.38E-13	
35	Dibenzofuran		4.22E-14	1.08E-13	1.50E-13	
36	Dichlorobenzenes (total)		5.44E-15	9.44E-17	5.53E-15	
37	1,4-Dichlorobenzene		3.44E-16	5.97E-18	3.50E-16	
38	1,1-Dichloroethane		1.56E-14	2.70E-16	1.58E-14	
39	1,2-Dichloroethane		4.86E-15	1.44E-14	1.92E-14	
40	1,1-Dichloroethene		8.33E-15	1.45E-16	8.47E-15	
41	1,2-Dichloroethene		7.20E-15	1.25E-16	7.33E-15	
42	1,2-Dichloropropane		3.08E-15	5.35E-17	3.14E-15	
43	Dieldrin		4.82E-17	3.08E-16	3.56E-16	
44	Dimethyldisulfide		1.32E-14	2.30E-16	1.35E-14	
45	Hexachlorobenzene		1.27E-13	7.38E-14	2.01E-13	
46	Hydrazine		1.65E-10	1.30E-08	1.31E-08	
47	Lindane		2.24E-17	5.78E-17	8.01E-17	
48	Malathion		6.61E-17	1.69E-16	2.35E-16	
49	Methyl chloride		6.46E-15	1.12E-16	6.57E-15	
50	Methylene chloride		3.90E-13	6.77E-15	3.97E-13	
51	Methyl ethyl ketone		8.17E-15	3.08E-14	3.89E-14	
52	4-Methylphenol		7.41E-15	2.01E-14	2.76E-14	
53	Monomethyl hydrazine		5.19E-11	2.85E-09	2.90E-09	
54	Naphthalene		8.74E-16	2.27E-15	3.14E-15	
55	Naphthalene carbonitrile		4.62E-12	1.20E-11	1.66E-11	
56	n-Nitrosodimethylamine		5.28E-14	1.82E-12	1.88E-12	
57	PAHS					
58	Acenaphthalene		2.10E-13	5.46E-13	7.57E-13	
59	Acenaphthene		2.10E-13	5.39E-13	7.49E-13	
60	Benzo(a)pyrene		4.22E-13	1.08E-12	1.50E-12	

A	B	C	BH	BI	BJ
2			TABLE 6		
61	Chrysene		4.22E-14	1.08E-13	1.50E-13
62	Dibenz(a,h)anthracene		4.22E-13	1.08E-12	1.50E-12
63	Fluoranthene		4.22E-13	1.08E-12	1.50E-12
64	Fluorene		4.22E-14	1.08E-13	1.51E-13
65	Phenanthrene		1.65E-16	4.21E-16	5.86E-16
66	Pyrene		8.45E-13	2.16E-12	3.01E-12
67	Parathion		1.05E-16	2.68E-16	3.73E-16
68	Pentachlorobenzene		5.19E-14	3.04E-14	8.23E-14
69	Phenol		8.30E-16	2.45E-15	3.28E-15
70	Pyridine		4.62E-12	8.03E-14	4.70E-12
71	Quinoline		4.76E-14	1.27E-13	1.75E-13
72	Tetrachlorobenzene		2.55E-14	1.55E-14	4.10E-14
73	Tetrachloroethene		8.91E-16	1.55E-17	9.06E-16
74	Toluene		1.42E-14	4.11E-17	1.42E-14
75	Trichlorobenzene		1.29E-14	7.42E-15	2.03E-14
76	Trichloroethene		9.50E-15	1.65E-16	9.66E-15
77	Unsym. dimethyl hydrazine		2.05E-10	7.51E-09	7.71E-09
78	Vapona		4.13E-16	1.11E-15	1.52E-15
79	Vinyl acetate		5.87E-15	1.02E-16	5.97E-15
80	Vinyl chloride		5.44E-15	9.44E-17	5.53E-15
81	Xylenes (total)		1.01E-15	5.87E-19	1.01E-15
82					
83	INORGANICS				
84	Arsenic		5.57E-12	NE	5.57E-12
85	Cadmium		3.23E-14	NE	3.23E-14
86	Chromium (III)		1.43E-13	NE	1.43E-13
87	Chromium (VI)		5.04E-15	NE	5.04E-15
88	Copper		2.12E-13	NE	2.12E-13
89	Iron		5.14E-09	NE	5.14E-09
90	Lead		2.09E-13	NE	2.09E-13
91	Mercury		2.09E-13	NE	2.09E-13
92	Selenium		6.33E-13	NE	6.33E-13
93	Silver		2.89E-15	NE	2.89E-15
94	Zinc		1.66E-12	NE	1.66E-12
95					
96					
97					
98					
99					
100					
101					
102					
103					

br 3.80E+00 M3/day
bw 9.00E+00 Kg
um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	TABLE 7		BN	BO	BP	BQ	BR
			BL	BM					
2	BASE CASE								
3									
4									
5									
6									
7									
8									
9									
10									
11									
12	ORGANICS								
13	Acetone		1.26E-14	1.26E-14	2.89E-01	3.65E-15	3.65E-15	3.24E-16	3.24E-16
14	Acetonitrile		2.33E-11	2.37E-11	4.09E+01	9.52E-10	9.71E-10	8.47E-11	8.64E-11
15	Acrylonitrile		4.86E-12	4.86E-12	5.13E-02	2.50E-13	2.50E-13	2.22E-14	2.22E-14
16	Aldrin		2.19E-17	2.40E-17	4.09E+01	8.96E-16	9.81E-16	7.97E-17	8.72E-17
17	Aniline		7.15E-13	7.33E-13	4.09E+01	2.93E-11	3.00E-11	2.60E-12	2.67E-12
18	Atrazine		4.09E-15	4.19E-15	4.09E+01	1.67E-13	1.72E-13	1.49E-14	1.53E-14
19	Benzaldehyde		3.09E-13	3.17E-13	4.09E+01	1.27E-11	1.30E-11	1.13E-12	1.15E-12
20	Benzene		3.68E-15	3.68E-15	1.92E-02	7.08E-17	7.08E-17	6.29E-18	6.29E-18
21	Benzofuran		1.47E-12	1.50E-12	4.09E+01	6.01E-11	6.16E-11	5.34E-12	5.47E-12
22	Benzoic Acid		1.49E-13	1.52E-13	4.09E+01	6.09E-12	6.24E-12	5.41E-13	5.55E-13
23	Benzonitrile		3.29E-12	3.37E-12	4.09E+01	1.35E-10	1.38E-10	1.20E-11	1.23E-11
24	Benzothiazole		1.38E-15	1.41E-15	4.09E+01	5.63E-14	5.78E-14	5.01E-15	5.14E-15
25	Biphenyl		1.43E-12	1.43E-12	2.89E-01	4.14E-13	4.14E-13	3.68E-14	3.68E-14
26	Bis(2-ethylhexyl)phthalate		9.70E-16	2.47E-15	4.09E+01	3.97E-14	1.01E-13	3.53E-15	8.99E-15
27	Carbazole		6.55E-15	6.72E-15	4.09E+01	2.68E-13	2.75E-13	2.38E-14	2.44E-14
28	Carbon Tetrachloride		1.87E-14	1.87E-14	2.89E-01	5.38E-15	5.38E-15	4.79E-16	4.79E-16
29	4-Chloroaniline		3.81E-16	3.91E-16	4.09E+01	1.56E-14	1.60E-14	1.39E-15	1.42E-15
30	Chlorobenzene		8.85E-16	8.85E-16	2.89E-01	2.55E-16	2.55E-16	2.27E-17	2.27E-17
31	4-Chlorobiphenyl		9.15E-16	9.38E-16	4.09E+01	3.74E-14	3.84E-14	3.33E-15	3.42E-15
32	4,4'-Chlorobiphenyl		4.60E-17	4.72E-17	4.09E+01	1.88E-15	1.93E-15	1.67E-16	1.72E-16
33	Chloroethane		3.43E-14	3.52E-14	4.09E+01	1.40E-12	1.44E-12	1.25E-13	1.28E-13
34	Chloroform		1.58E-13	1.58E-13	2.89E-01	4.57E-14	4.57E-14	4.06E-15	4.06E-15
35	Dibenzofuran		2.89E-14	2.97E-14	4.09E+01	1.18E-12	1.21E-12	1.05E-13	1.08E-13
36	Dichlorobenzenes (total)		3.68E-15	3.68E-15	2.89E-01	1.06E-15	1.06E-15	9.44E-17	9.44E-17
37	1,4-Dichlorobenzene		2.33E-16	2.33E-16	2.89E-01	6.71E-17	6.71E-17	5.97E-18	5.97E-18
38	1,1-Dichloroethane		1.05E-14	1.05E-14	2.89E-01	3.04E-15	3.04E-15	2.70E-16	2.70E-16
39	1,2-Dichloroethane		3.86E-15	3.95E-15	4.09E+01	1.58E-13	1.62E-13	1.40E-14	1.44E-14
40	1,1-Dichloroethene		5.64E-15	5.64E-15	2.89E-01	1.63E-15	1.63E-15	1.45E-16	1.45E-16
41	1,2-Dichloroethene		4.87E-15	4.87E-15	2.89E-01	1.41E-15	1.41E-15	1.25E-16	1.25E-16
42	1,2-Dichloropropane		2.09E-15	2.09E-15	2.89E-01	6.02E-16	6.02E-16	5.35E-17	5.35E-17
43	Dieldrin		8.27E-17	8.45E-17	4.09E+01	3.39E-15	3.46E-15	3.01E-16	3.08E-16
44	Dimethyldisulfide		8.96E-15	8.96E-15	2.89E-01	2.58E-15	2.58E-15	2.30E-16	2.30E-16
45	Hexachlorobenzene		8.75E-14	8.99E-14	9.24E+00	8.09E-13	8.30E-13	7.19E-14	7.38E-14
46	Hydrazine		3.51E-09	3.57E-09	4.09E+01	1.44E-07	1.46E-07	1.28E-08	1.30E-08
47	Lindane		1.55E-17	1.59E-17	4.09E+01	6.34E-16	6.50E-16	5.63E-17	5.78E-17
48	Malathion		4.53E-17	4.65E-17	4.09E+01	1.85E-15	1.90E-15	1.65E-16	1.69E-16
49	Methyl chloride		4.37E-15	4.37E-15	2.89E-01	1.26E-15	1.26E-15	1.12E-16	1.12E-16
50	Methylene chloride		2.64E-13	2.64E-13	2.89E-01	7.61E-14	7.61E-14	6.77E-15	6.77E-15
51	Methyl ethyl ketone		8.27E-15	8.46E-15	4.09E+01	3.39E-13	3.46E-13	3.01E-14	3.08E-14
52	4-Methylphenol		5.40E-15	5.53E-15	4.09E+01	2.21E-13	2.27E-13	1.96E-14	2.01E-14
53	Monomethyl hydrazine		7.72E-10	7.84E-10	4.09E+01	3.16E-08	3.21E-08	2.81E-09	2.85E-09
54	Naphthalene		6.07E-16	6.23E-16	4.09E+01	2.49E-14	2.55E-14	2.21E-15	2.27E-15
55	Naphthalene carbonitrile		3.21E-12	3.29E-12	4.09E+01	1.31E-11	1.35E-11	1.17E-11	1.20E-11
56	n-Nitrosodimethylamine		4.93E-13	5.01E-13	4.09E+01	2.02E-11	2.05E-11	1.80E-12	1.82E-12
57	PAHs								
58	Acenaphthalene		1.46E-13	1.50E-13	4.09E+01	5.99E-12	6.14E-12	5.32E-13	5.46E-13
59	Acenaphthene		1.44E-13	1.48E-13	4.09E+01	5.91E-12	6.06E-12	5.25E-13	5.39E-13
60	Benzo(a)pyrene		2.87E-13	2.97E-13	4.09E+01	1.17E-11	1.21E-11	1.04E-12	1.08E-12

MOTHER'S MILK PATHWAY

18-Jun-91
14:11:45
RES-A
Daily Intake (mg/kg/day)

DI
Average
Total

DI
Maximum
Total

TF
Breast milk
Transfer
Factor
(day)

Average
Breast milk
Conc.
mg/kg

Maximum
Breast milk
Conc.
mg/kg

Average
Daily Intake
mg/kg/day

Maximum
Daily Intake
mg/kg/day

TABLE 7									
A	B	C	BL	BM	BN	BO	BP	BQ	BR
61	Chrysene		2.88E-14	2.96E-14	4.09E+01	1.18E-12	1.21E-12	1.05E-13	1.08E-13
62	Dibenzo(a,h)anthracene		2.87E-13	2.97E-13	4.09E+01	1.17E-11	1.22E-11	1.04E-12	1.08E-12
63	Fluoranthene		2.90E-13	2.97E-13	4.09E+01	1.19E-11	1.22E-11	1.05E-12	1.08E-12
64	Fluorene		2.91E-14	2.98E-14	4.09E+01	1.19E-12	1.22E-12	1.06E-13	1.08E-13
65	Phenanthrene		1.13E-16	1.16E-16	4.09E+01	4.62E-15	4.74E-15	4.11E-16	4.21E-16
66	Pyrene		5.79E-13	5.94E-13	4.09E+01	2.37E-11	2.43E-11	2.11E-12	2.16E-12
67	Parathion		7.18E-17	7.36E-17	4.09E+01	2.94E-15	3.02E-15	2.61E-16	2.68E-16
68	Pentachlorobenzene		3.61E-14	3.71E-14	9.24E+00	3.34E-13	3.42E-13	2.97E-14	3.04E-14
69	Phenol		6.58E-16	6.74E-16	4.09E+01	2.69E-14	2.76E-14	2.40E-15	2.45E-15
70	Pyridine		3.13E-12	3.13E-12	2.89E-01	9.03E-13	9.03E-13	8.03E-14	8.03E-14
71	Quinoline		3.40E-14	3.49E-14	4.09E+01	1.39E-12	1.43E-12	1.24E-13	1.27E-13
72	Tetrachlorobenzene		1.84E-14	1.89E-14	9.24E+00	1.70E-13	1.74E-13	1.51E-14	1.55E-14
73	Tetrachloroethene		6.03E-16	6.03E-16	2.89E-01	1.74E-16	1.74E-16	1.55E-17	1.55E-17
74	Toluene		9.61E-15	9.61E-15	4.81E-02	4.62E-16	4.62E-16	4.11E-17	4.11E-17
75	Trichlorobenzene		8.81E-15	9.04E-15	9.24E+00	8.14E-14	8.35E-14	7.23E-15	7.42E-15
76	Trichloroethene		6.43E-15	6.43E-15	2.89E-01	1.86E-15	1.86E-15	1.65E-16	1.65E-16
77	Unsym. dimethyl hydrazine		2.03E-09	2.06E-09	4.09E+01	8.32E-08	8.45E-08	7.40E-09	7.51E-09
78	Vapona		2.97E-16	3.04E-16	4.09E+01	1.22E-14	1.25E-14	1.08E-15	1.11E-15
79	Vinyl acetate		3.97E-15	3.97E-15	2.89E-01	1.15E-15	1.15E-15	1.02E-16	1.02E-16
80	Vinyl chloride		3.68E-15	3.68E-15	2.59E-01	1.06E-15	1.06E-15	9.44E-17	9.44E-17
81	Xylenes (total)		6.86E-16	6.86E-16	9.62E-03	6.60E-18	6.60E-18	5.87E-19	5.87E-19
82									
83	INORGANICS								
84	Arsenic		3.78E-12	3.89E-12	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
85	Cadmium		2.19E-14	2.25E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
86	Chromium (III)		9.69E-14	9.69E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
87	Chromium (VI)		3.41E-15	3.41E-15	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
88	Copper		1.44E-13	1.44E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
89	Iron		3.48E-09	3.48E-09	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
90	Lead		1.41E-13	1.41E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
91	Mercury		1.43E-13	1.47E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
92	Selenium		4.28E-13	4.28E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
93	Silver		1.96E-15	1.96E-15	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
94	Zinc		1.13E-12	1.13E-12	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
95									
96									
97									
98									
99									
100									
101									
102									
103									
104									
105									
106									
107									
108									
109									
110									
111									
112									
113									
114									

TF = 0.8*0.04/0.3/k
 Breast Milk = DI*TF(day)
 EDI = BMC*IR/BM(infant)

8.00E-01 Ingestion Rate (kg/day)
 9.00E+00 Body Weight (kg) - infant

HALF LIVES
 k
 0.33 2.08E+00 Acrylonitrile
 0.125 5.54E+00 Benzene
 240 2.89E-03 DDE
 120 5.77E-03 DDT
 1.875 3.70E-01 1,1-DCE & Phenol
 266 2.61E-03 Dieldrin
 2120 3.27E-04 Dioxin
 60 1.15E-02 Hexachlorobenzene
 0.3125 2.22E+00 Toluene
 0.0625 1.11E+01 Xylene

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

TABLE 8 TOMATO CONSUMPTION - AVERAGE										
B	C	D	E	F	G	H	I	J	K	
BASE CASE		D DEPOSITION RATE g/m2/yr	C soil AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	PUF PLANT UPTAKE FACTOR	Cu AVERAGE CONC.DUE TO UPTAKE mg/Kg	Cs AVERAGE CONC. ON PLANT SURFACE mg/Kg	Ct AVERAGE CONC ON PLANT mg/Kg	EDI ADULT AVERAGE ESTIMATED DAILY INTAKE mg/Kg/day	EDI CHILD AVERAGE ESTIMATED DAILY INTAKE mg/Kg/day	
117	18-Jun-91 14:11:47									
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130	ORGANICS									
131	Acetonitrile	1.68E-10	2.44E-09	3.68E+00	8.96E-09	1.19E-11	8.97E-09	4.76E-12	1.13E-11	
132	Aldrin	2.60E-16	3.78E-15	1.19E-04	4.51E-19	1.85E-17	1.90E-17	1.01E-20	2.39E-20	
133	Aniline	9.42E-12	1.37E-10	7.02E-01	9.61E-11	6.71E-13	9.68E-11	5.13E-14	1.22E-13	
134	Atrazine	5.82E-14	8.46E-13	6.51E-02	5.51E-14	4.15E-15	5.93E-14	3.14E-17	7.45E-17	
135	Benzaldehyde	4.29E-12	6.24E-11	3.23E-01	2.02E-11	3.06E-13	2.05E-11	1.09E-14	2.58E-14	
136	Benzo(a,h)anthracene	2.09E-11	3.04E-10	6.60E-02	2.00E-11	1.49E-12	2.15E-11	1.14E-14	2.71E-14	
137	Benzoic Acid	2.10E-12	3.06E-11	1.92E-01	5.87E-12	1.50E-13	6.02E-12	3.19E-15	7.57E-15	
138	Benzonitrile	4.59E-11	6.67E-10	2.91E-01	1.94E-10	3.27E-12	1.97E-10	1.05E-13	2.48E-13	
139	Benzothiazole	1.96E-14	2.84E-13	1.59E-01	4.53E-14	1.39E-15	1.67E-14	2.48E-17	5.87E-17	
140	Bis(2-ethylhexyl)phthalate	1.15E-14	1.68E-13	2.02E-05	3.38E-18	8.22E-16	8.25E-16	4.38E-19	1.04E-18	
141	Carbazole	9.42E-14	1.37E-12	2.88E-02	3.95E-14	6.71E-15	4.62E-14	2.45E-17	5.81E-17	
142	4-Chloroaniline	5.39E-15	7.84E-14	2.03E-01	1.59E-14	3.84E-16	1.63E-14	8.63E-18	2.05E-17	
143	4-Chlorobiphenyl	1.33E-14	1.93E-13	3.36E-03	6.49E-16	9.46E-16	1.60E-15	8.46E-19	2.01E-18	
144	4,4'-Chlorobiphenyl	6.69E-16	9.73E-15	1.35E-03	1.32E-17	4.76E-17	6.08E-17	3.22E-20	7.64E-20	
145	Chloroethane	4.76E-13	6.93E-12	3.19E-01	2.21E-12	3.39E-14	2.24E-12	1.19E-15	2.82E-15	
146	Dibenzofuran	4.19E-13	6.09E-12	9.52E-03	5.80E-14	2.98E-14	8.78E-14	4.66E-17	1.10E-16	
147	1,2-Dichloroethane	4.82E-14	7.01E-13	3.23E-01	2.27E-13	3.43E-15	2.30E-13	1.22E-16	2.89E-16	
148	Dieldrin	4.78E-16	6.95E-15	5.92E-04	4.11E-18	3.40E-17	3.81E-17	2.02E-20	4.79E-20	
149	Hexachlorobenzene	1.26E-12	1.84E-11	1.57E-03	2.88E-14	8.99E-14	1.19E-13	6.30E-17	1.49E-16	
150	Hydrazine	1.63E-09	2.37E-08	1.43E+02	3.39E-06	1.16E-10	3.39E-06	1.80E-09	4.26E-09	
151	Lindane	2.22E-16	3.23E-15	2.85E-02	9.18E-17	1.58E-17	1.08E-16	5.71E-20	1.35E-19	
152	Malathion	6.56E-16	9.53E-15	4.92E-02	4.69E-16	4.67E-17	5.16E-16	2.73E-19	6.48E-19	
153	Methyl ethyl ketone	8.10E-14	1.18E-12	1.65E+00	1.94E-12	5.77E-15	1.95E-12	1.03E-15	2.45E-15	
154	4-Methylphenol	7.35E-14	1.07E-12	1.75E-01	1.87E-13	5.23E-15	1.92E-13	1.02E-16	2.42E-16	
155	Monomethyl hydrazine	5.14E-10	7.48E-09	1.43E+02	1.07E-06	3.66E-11	1.07E-06	5.66E-10	1.34E-09	
156	Naphthalene	8.67E-15	1.26E-13	2.66E-02	3.36E-15	6.18E-16	3.97E-15	2.11E-18	5.00E-18	
157	Naphthalene carbonitrile	4.59E-11	6.67E-10	2.66E-02	1.77E-11	3.27E-12	2.10E-11	1.11E-14	2.64E-14	
158	n-Nitrosodimethylamine	5.23E-13	7.61E-12	5.79E+00	4.40E-11	3.73E-14	4.41E-11	2.34E-14	5.54E-14	
159	PAHs									
160	Acenaphthalene	2.09E-12	3.04E-11	1.02E-02	3.09E-13	1.49E-13	4.57E-13	2.43E-16	5.75E-16	
161	Acenaphthene	2.09E-12	3.04E-11	1.24E-02	3.77E-13	1.49E-13	5.26E-13	2.79E-16	6.61E-16	
162	Benzo(a)pyrene	4.19E-12	6.09E-11	4.41E-04	2.69E-14	2.98E-13	3.25E-13	1.72E-16	4.09E-16	
163	Chrysene	4.19E-13	6.09E-12	1.02E-03	6.23E-15	2.98E-14	3.61E-14	1.91E-17	4.53E-17	
164	Dibenzo(a,h)anthracene	4.19E-12	6.09E-11	3.96E-04	2.41E-14	2.98E-13	3.23E-13	1.71E-16	4.05E-16	
165	Fluoranthene	4.19E-12	6.09E-11	2.19E-03	1.33E-13	2.98E-13	4.32E-13	2.29E-16	5.43E-16	
166	Fluorene	4.19E-13	6.09E-12	6.73E-03	4.10E-14	2.98E-14	7.08E-14	3.75E-17	8.90E-17	
167	Phenanthrene	1.63E-15	2.37E-14	5.22E-03	1.24E-16	1.16E-16	2.40E-16	1.27E-19	3.02E-19	
168	Pyrene	8.38E-12	1.22E-10	2.31E-03	2.81E-13	5.97E-13	8.78E-13	4.66E-16	1.10E-15	
169	Parathion	1.04E-15	1.51E-14	1.44E-02	2.17E-16	7.39E-17	2.91E-16	1.54E-19	3.66E-19	
170	Pentachlorobenzene	5.14E-13	7.48E-12	2.64E-03	1.98E-14	3.66E-14	5.64E-14	2.99E-17	7.09E-17	
171	Phenol	8.23E-15	1.20E-13	3.32E-01	3.98E-14	5.86E-16	4.03E-14	2.14E-17	5.07E-17	
172	Quinoline	4.72E-13	6.86E-12	1.55E-01	1.06E-12	3.36E-14	1.10E-12	5.82E-16	1.38E-15	
173	Tetrachlorobenzene	2.53E-13	3.68E-12	6.82E-03	2.51E-14	1.80E-14	4.31E-14	2.28E-17	5.41E-17	
174	Trichlorobenzene	1.28E-13	1.86E-12	1.15E-02	2.14E-14	9.12E-15	3.05E-14	1.62E-17	3.83E-17	
175	Unsym. dimethyl hydrazine	2.03E-09	2.95E-08	5.91E+01	1.74E-06	1.44E-10	1.74E-06	9.25E-10	2.19E-09	
176	Vapona	4.10E-15	5.96E-14	3.60E-01	2.15E-14	2.92E-16	2.18E-14	1.15E-17	2.73E-17	

117	B	C	D	E	F	G	H	I	J	K
118	BASE CASE		TABLE 8							
177										
178	INORGANICS									
179	Arsenic		5.53E-11	8.04E-10	3.60E-04	2.89E-13	3.94E-12	4.23E-12	2.24E-15	5.31E-15
180	Cadmium		3.20E-13	4.66E-12	9.00E-03	4.19E-14	2.28E-14	6.48E-14	3.43E-17	8.14E-17
181	Mercury		2.07E-12	3.01E-11	1.20E-02	3.62E-13	1.48E-13	5.09E-13	2.70E-16	6.40E-16
182										

183	ADULT	CHILD
184	6.40E-02	3.36E-02
185	7.00E+01	1.55E+01
186	6.80E-02	6.80E-02
187	5.78E-07	5.78E-07
188	3.89E+06	3.89E+06
189	1.34E+00	1.34E+00
190	7.85E+04	7.85E+04
191	0.58	0.58
192	3.15E+07	3.15E+07
193	1.00E+03	1.00E+03

$$\text{VSDF} = r \cdot (1 - e^{-Y \cdot K})$$

Y*K

Cs = VSDF*Deposition*mgg/secyr

Cu = PUF*Cssoil

EDI = (Ct)*ADITOM*HG/ADWT

ADITOM

ADWT

r

k

t

Y

VSDF

HG

secyr

mgg

TOmato

1/s

s

kg/M2

VSDF tomatato, M2s/Kg

FRACT. CONSUMED FROM RURAL SOURCE.

mg/g

-kt

130	ORGANICS								
131	Acetonitrile	1.68E-10	2.47E-09	3.68E+00	9.09E-09	4.18E-10	9.50E-09	5.04E-12	1.19E-11
132	Aldrin	2.60E-12	3.84E-15	1.19E-04	6.49E-16	6.49E-16	6.49E-16	3.44E-19	8.16E-19
133	Aniline	9.42E-12	1.39E-10	7.02E-01	9.75E-19	2.35E-11	1.21E-10	6.42E-14	1.52E-13
134	Atrazine	5.82E-14	8.59E-13	6.51E-02	5.59E-14	1.45E-13	2.01E-13	1.07E-16	2.53E-16
135	Benzaldehyde	4.29E-12	6.33E-11	3.23E-01	2.05E-11	1.07E-11	3.12E-11	1.65E-14	3.92E-14
136	Benzo(a)pyrene	2.09E-11	3.08E-10	6.60E-02	2.03E-11	5.20E-11	7.24E-11	3.84E-14	9.10E-14
137	Benzoic Acid	2.10E-12	3.10E-11	1.92E-01	5.96E-12	5.24E-12	1.12E-11	5.94E-15	1.41E-14
138	Benzonitrile	4.59E-11	6.77E-10	2.91E-01	1.97E-10	1.14E-10	3.11E-10	1.65E-13	3.91E-13
139	Benzothiazole	1.96E-14	2.88E-13	1.59E-01	4.60E-14	4.87E-14	9.47E-14	1.53E-17	1.19E-16
140	Bis(2-ethylhexyl)phthalate	1.15E-14	1.70E-13	2.02E-05	3.43E-18	2.88E-14	1.53E-17	5.02E-17	3.62E-17
141	Carbazole	9.42E-14	1.39E-12	2.88E-02	4.01E-14	2.35E-13	2.75E-13	1.45E-16	3.46E-16
142	4-Chloroaniline	5.39E-15	7.96E-14	2.03E-01	1.61E-14	1.34E-14	1.57E-17	1.57E-17	3.72E-17
143	4-Chlorobiphenyl	1.33E-14	1.96E-13	3.36E-03	6.58E-16	3.31E-14	3.39E-14	1.79E-17	4.25E-17
144	4,4'-Chlorobiphenyl	6.09E-16	9.87E-15	1.35E-03	1.34E-17	1.67E-15	1.68E-15	8.91E-19	2.11E-18
145	Chloroethane	4.70E-13	7.03E-12	3.19E-01	2.24E-12	1.19E-12	3.43E-12	1.82E-15	4.31E-15
146	Dibenzofuran	4.19E-13	6.18E-12	9.52E-03	5.88E-14	1.04E-12	1.10E-12	5.85E-16	1.39E-15
147	1,2-Dichloroethane	4.82E-14	7.11E-13	3.23E-01	2.30E-13	1.20E-13	3.50E-13	1.86E-16	4.40E-16
148	Dieldrin	4.78E-16	7.05E-15	5.92E-04	4.17E-18	1.19E-15	1.20E-15	6.34E-19	1.50E-18
149	Hexachlorobenzene	1.25E-12	1.86E-11	1.57E-03	2.92E-14	3.15E-12	3.18E-12	1.68E-15	3.99E-15
150	Hydrazine	1.63E-09	2.41E-08	1.43E+02	3.44E-06	4.07E-09	3.44E-06	1.82E-09	4.32E-09
151	Lindane	2.22E-16	3.27E-15	2.85E-02	9.32E-17	5.53E-16	6.66E-16	3.43E-19	8.13E-19
152	Malathion	6.56E-16	9.67E-15	4.92E-02	4.76E-16	1.63E-15	2.11E-15	1.12E-18	2.65E-18
153	Methyl ethyl ketone	8.10E-14	1.19E-12	1.65E+00	1.97E-12	2.02E-13	2.17E-12	1.15E-15	2.73E-15
154	4-Methylphenol	7.35E-14	1.08E-12	1.75E-01	1.90E-13	1.83E-13	3.73E-13	1.98E-16	4.69E-16
155	Monomethyl hydrazine	5.14E-10	7.59E-09	1.43E+02	1.08E-06	1.28E-09	1.08E-06	5.75E-10	1.36E-09
156	Naphthalene	8.67E-15	1.28E-13	2.66E-02	3.40E-15	2.16E-14	2.50E-14	1.33E-17	3.15E-17
157	Naphthalene carbonitrile	4.59E-11	6.77E-10	2.66E-02	1.80E-11	1.14E-10	1.32E-10	7.02E-14	1.66E-13
158	n-Nitrosodimethylamine	5.23E-13	7.72E-12	5.79E+00	4.47E-11	1.30E-12	4.60E-11	2.44E-14	5.78E-14
159	PAHs								
160	Acenaphthalene	2.09E-12	3.08E-11	1.02E-02	3.13E-13	5.20E-12	5.52E-12	2.93E-15	6.94E-15
161	Acenaphthene	2.09E-12	3.08E-11	1.24E-02	3.83E-13	5.20E-12	5.59E-12	2.96E-15	7.02E-15
162	Benzo(a)pyrene	4.19E-12	6.18E-11	4.41E-04	2.73E-14	1.04E-11	1.05E-11	5.55E-15	1.32E-14
163	Chrysene	4.19E-13	6.18E-12	1.02E-03	6.32E-15	1.04E-12	1.05E-12	5.57E-16	1.32E-15
164	Dibenzo(a,h)anthracene	4.19E-12	6.18E-11	3.96E-04	2.45E-14	1.04E-11	1.05E-11	5.55E-15	1.32E-14
165	Fluoranthene	4.19E-12	6.18E-11	2.19E-03	1.35E-13	1.06E-11	1.06E-11	5.61E-15	1.33E-14
166	Fluorene	4.19E-13	6.18E-12	6.73E-03	4.16E-14	1.04E-12	1.09E-12	5.76E-16	1.37E-15
167	Phenanthrene	1.63E-15	2.41E-14	5.22E-03	1.26E-16	4.07E-15	4.19E-15	2.22E-18	5.27E-18
168	Pyrene	8.38E-12	1.24E-10	2.31E-03	2.86E-13	2.09E-11	2.12E-11	1.12E-14	2.66E-14
169	Parathion	1.04E-15	1.53E-14	1.44E-02	2.20E-16	2.59E-15	2.81E-15	1.49E-18	3.53E-18
170	Pentachlorobenzene	5.14E-13	7.59E-12	2.64E-02	2.00E-14	1.28E-12	1.30E-12	6.91E-16	1.64E-15
171	Phenol	8.23E-15	1.21E-13	3.32E-01	4.03E-14	2.05E-14	6.08E-14	3.23E-17	7.65E-17
172	Quinoline	4.72E-13	6.96E-12	1.55E-01	1.08E-12	1.18E-12	2.26E-12	1.20E-15	2.84E-15
173	Tetrachlorobenzene	2.53E-13	3.73E-12	6.82E-03	2.54E-14	3.30E-13	6.56E-13	3.48E-16	8.24E-16
174	Trichlorobenzene	1.28E-13	1.89E-12	1.15E-02	2.17E-14	3.19E-13	3.41E-13	1.81E-16	4.29E-16
175	Unsym. dimethyl hydrazine	2.03E-09	2.99E-08	5.91E-01	1.77E-06	5.06E-09	1.77E-06	9.41E-10	2.23E-09
176	Vapona	4.10E-15	6.05E-14	3.60E-01	2.18E-14	1.02E-14	3.20E-14	1.70E-17	4.02E-17

117	B	C	M	N	O	P	Q	R	S	T
118	BASE CASE									
177	TABLE 9									
178	INORGANICS									
179	Arsenic	5.53E-11	8.15E-10	3.60E-04	2.94E-13	1.38E-10	7.32E-14	1.74E-13		
180	Cadmium	3.20E-13	4.73E-12	9.00E-03	4.25E-14	7.99E-13	8.41E-13	1.06E-15		
181	Mercury	2.07E-12	3.06E-11	1.20E-02	3.67E-13	5.17E-12	5.53E-12	6.96E-15		

ADULT
 6.40E+02
 7.00E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 5.80E-01
 3.15E+07
 1.00E+03

CHILD
 3.36E-02
 1.55E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 5.80E-01
 3.15E+07
 1.00E+03

TOMATO INGESTION RATE ,Kg/day
 BODY WEIGHT, KG
 r tomato
 k tomato, 1/s
 t tomato, s
 Y tomato, Kg/M2
 VSDF tomato, M2s/Kg
 FRACT. CONSUMED FROM RURAL SOURCE.
 sec/yr
 mg/g
 -kt

ADITOM
 ADWT
 r
 k
 t
 Y
 VSDF
 HG
 secyr
 mgg

$$VSDF = r \cdot (1 - e^{-Y \cdot k})$$

$$Cs = VSDF \cdot Deposition \cdot mgg / secyr$$

$$Cu = PUF \cdot C_{soil}$$

$$EDI = (Ct) \cdot ADITOM \cdot HG / ADWT$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-JUN-91

117 B	C	V	W	X	Y	Z	AA	AB	AC
118	BASE CASE	TABLE 10							
119		LETUCE CONSUMPTION - AVERAGE							
120									
121									
122									
123									
124									
125									
126									
127									
128									
129									
130	ORGANICS								
131	Acetonitrile	1.68E-10	2.44E-09	3.06E+00	7.46E-09	2.40E-11	7.49E-09	7.38E-13	3.47E-13
132	Aldrin	2.60E-16	3.78E-15	9.93E-05	3.76E-19	3.73E-17	3.76E-17	3.71E-21	1.75E-21
133	Aniline	9.42E-12	1.37E-10	5.85E-01	8.01E-11	1.35E-12	8.15E-11	8.03E-15	3.78E-15
134	Atrazine	5.82E-14	8.46E-13	5.43E-02	4.59E-14	8.34E-15	5.43E-14	5.35E-18	2.52E-18
135	Benzaldehyde	4.29E-12	6.24E-11	2.69E-01	1.68E-11	6.15E-13	1.74E-11	1.72E-15	8.09E-16
136	Benzofuran	2.09E-11	3.04E-10	5.50E-02	1.67E-11	2.99E-12	1.97E-11	1.94E-15	9.13E-16
137	Benzoic Acid	2.10E-12	3.06E-11	1.60E-01	4.89E-12	3.01E-13	5.19E-12	5.12E-16	2.41E-16
138	Benzonitrile	4.59E-11	6.67E-10	2.42E-01	1.61E-10	6.57E-12	1.68E-10	1.66E-14	7.80E-15
139	Benzothiazole	1.96E-14	2.84E-13	1.33E-01	3.77E-14	2.80E-15	4.05E-14	4.00E-18	1.88E-18
140	Bis(2-ethylhexyl)phthalate	1.15E-14	1.68E-13	1.68E-05	2.82E-18	1.65E-15	1.66E-15	1.63E-19	7.68E-20
141	Carbazole	9.42E-14	1.37E-12	2.40E-02	3.29E-14	1.35E-14	4.64E-14	4.58E-18	2.15E-18
142	4-Chloroaniline	5.39E-15	7.84E-14	1.69E-01	1.32E-14	7.73E-16	1.40E-14	1.38E-18	6.50E-19
143	4-Chlorobiphenyl	1.33E-14	1.93E-13	2.80E-03	5.41E-16	1.90E-15	2.44E-15	2.41E-19	1.13E-19
144	4,4'-Chlorobiphenyl	6.69E-16	9.73E-15	1.13E-03	1.10E-17	9.58E-17	1.07E-16	1.05E-20	4.95E-21
145	Chloroethane	4.76E-13	6.93E-12	2.66E-02	1.84E-12	6.82E-14	1.91E-12	1.88E-16	8.86E-17
146	Dibenzofuran	4.19E-13	6.09E-12	7.93E-03	4.83E-14	6.00E-14	1.08E-13	1.07E-17	5.03E-18
147	1,2-Dichloroethane	4.82E-14	7.01E-13	2.69E-01	1.89E-13	6.90E-15	1.96E-13	1.93E-17	9.09E-18
148	Dieldrin	4.78E-16	6.95E-15	4.93E-04	3.43E-18	6.84E-17	7.18E-17	7.08E-21	3.33E-21
149	Hexachlorobenzene	1.26E-12	1.84E-11	1.31E-03	2.40E-14	1.81E-13	2.05E-13	2.02E-17	9.50E-18
150	Hydrazine	1.63E-09	2.37E-08	1.19E+02	2.82E-06	2.34E-10	2.82E-06	2.78E-10	1.31E-10
151	Lindane	2.22E-16	3.23E-15	2.37E-02	7.65E-17	3.18E-17	1.08E-16	1.07E-20	5.03E-21
152	Malathion	6.56E-16	9.53E-15	4.10E-02	3.91E-16	9.39E-17	4.85E-16	4.78E-20	2.23E-20
153	Methyl ethyl ketone	8.10E-14	1.18E-12	1.37E+00	1.62E-12	1.16E-14	1.63E-12	1.61E-16	7.56E-17
154	4-Methylphenol	7.35E-14	1.07E-12	1.46E-01	1.56E-13	1.05E-14	1.66E-13	1.64E-17	7.72E-18
155	Monomethyl hydrazine	5.14E-10	7.48E-09	1.19E+02	8.90E-07	7.37E-11	8.90E-07	8.77E-11	4.13E-11
156	Naphthalene	8.67E-15	1.26E-13	2.22E-02	2.80E-15	1.24E-15	4.04E-15	3.98E-19	1.87E-19
157	Naphthalene carbonitrile	4.59E-11	6.67E-10	2.22E-02	1.48E-11	6.57E-12	2.14E-11	2.11E-15	9.91E-16
158	n-Nitrosodimethylamine	5.23E-13	7.61E-12	4.82E+00	3.67E-11	7.49E-14	3.68E-11	3.63E-15	1.71E-15
159	PAHs								
160	Acenaphthalene	2.09E-12	3.04E-11	8.48E-03	2.57E-13	2.99E-13	5.56E-13	5.48E-17	2.58E-17
161	Acenaphthene	2.09E-12	3.04E-11	1.04E-02	3.14E-13	2.99E-13	6.13E-13	6.05E-17	2.85E-17
162	Benzo(a)pyrene	4.19E-12	6.09E-11	3.68E-04	2.24E-14	6.00E-13	6.22E-13	6.14E-17	2.89E-17
163	Chrysene	4.19E-13	6.09E-12	8.53E-04	5.19E-15	6.00E-14	6.52E-14	6.43E-18	3.02E-18
164	Dibenzo(a,h)anthracene	4.19E-12	6.09E-11	3.30E-04	2.01E-14	6.00E-13	6.20E-13	6.11E-17	2.88E-17
165	Fluoranthene	4.19E-12	6.09E-11	1.83E-03	1.11E-13	6.00E-13	7.11E-13	7.01E-17	3.30E-17
166	Fluorene	4.19E-13	6.09E-12	5.60E-03	3.41E-14	6.00E-14	9.41E-14	9.28E-18	4.37E-18
167	Phenanthrene	1.63E-15	2.37E-14	4.35E-03	1.03E-16	2.34E-16	3.37E-16	3.32E-20	1.56E-20
168	Pyrene	8.38E-12	1.22E-10	1.93E-03	2.35E-13	1.20E-12	1.43E-16	1.41E-16	6.66E-17
169	Parathion	1.04E-15	1.51E-14	1.20E-02	1.81E-16	1.49E-16	3.30E-16	3.25E-20	1.53E-20
170	Pentachlorobenzene	5.14E-13	7.48E-12	2.20E-03	1.65E-14	7.37E-14	9.01E-14	8.89E-18	4.18E-18
171	Phenol	8.23E-15	1.20E-13	2.77E-01	3.31E-14	1.18E-15	3.43E-14	3.38E-18	1.59E-18
172	Quinoline	4.27E-13	6.86E-12	1.29E-01	8.87E-13	6.76E-14	9.55E-13	9.41E-17	4.43E-17
173	Tetrachlorobenzene	2.53E-13	3.68E-12	5.68E-03	2.09E-14	3.62E-14	5.71E-14	5.63E-18	2.65E-18
174	Trichlorobenzene	1.28E-13	1.86E-12	9.56E-03	1.78E-14	3.61E-14	3.61E-14	3.56E-18	1.68E-18
175	Unsym. dimethyl hydrazine	2.03E-09	2.95E-08	4.93E+01	1.45E-06	2.90E-10	1.45E-06	1.43E-10	6.74E-11
176	Vapona	4.10E-15	5.96E-14	3.00E-01	1.79E-14	5.87E-16	1.85E-14	1.82E-18	8.57E-19

117	B	C	V	W	X	Y	Z	AA	AB	AC
118	BASE CASE									
177	TABLE 10									
178	INORGANICS									
179	Arsenic		5.53E-11	8.04E-10	2.00E-03	1.61E-12	7.91E-12	9.52E-12	9.39E-16	4.42E-16
180	Cadmium		3.20E-13	4.66E-12	2.75E-02	1.28E-13	4.59E-14	1.74E-13	1.72E-17	8.07E-18
181	Mercury		2.07E-12	3.01E-11	4.50E-02	1.36E-12	2.97E-13	1.65E-12	1.63E-16	7.67E-17
182										
183										
184										
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										

CHILD

1.24E-03 LETTUCE INGESTION RATE , Kg/day
 1.55E+01 BODY WEIGHT, KG
 1.50E-01 r lettuce
 5.78E-07 k lettuce, 1/s
 5.62E+06 t lettuce, s
 1.58E+00 y lettuce, Kg/M2
 1.58E+05 VSDF lettuce, M2s/Kg
 5.80E-01 FRACT. CONSUMED FROM RURAL SOURCE.
 3.15E+07 sec/yr
 1.00E+03 mg/g
 -kt

ADULT

1.19E-02
 7.00E+01
 1.50E-01
 5.78E-07
 5.62E+06
 1.58E+00
 1.58E+05
 5.80E-01
 3.15E+07
 1.00E+03

ADILET
ADWT

r
k
t
y
HG
secyr
mkg

$$VSDF = r * (1 - e^{-Y * K})$$

Cs = VSDF*Deposition*mgg/secyr
 Cu = PUF*Csoil
 EDI = (Cs+Cu)*ADILET*HG/ADWT

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	AE	AF	AG	AH	AI	AJ	AK	AL
118	BASE CASE	TABLE 11	LETUCE CONSUMPTION - MAXIMUM							
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130	ORGANICS									
131	Acetonitrile	1.68E-10	2.47E-09	3.06E+00	7.57E-09	8.40E-10	8.41E-09	8.29E-13	3.90E-13	
132	Aldrin	2.60E-16	3.84E-15	9.93E-05	3.81E-19	1.30E-15	1.30E-15	1.29E-19	6.05E-20	
133	Aniline	9.42E-12	1.39E-10	5.85E-01	8.13E-11	4.72E-11	1.28E-11	1.27E-14	5.96E-15	
134	Atrazine	5.82E-14	8.59E-13	5.43E-02	4.66E-14	2.92E-13	3.38E-13	3.34E-17	1.57E-17	
135	Benzaldehyde	4.29E-12	6.33E-11	2.69E-01	1.71E-11	2.15E-11	3.86E-11	3.80E-15	1.79E-15	
136	Benzofuran	2.09E-11	3.08E-10	5.50E-02	1.69E-11	1.05E-10	1.22E-10	1.20E-14	5.64E-15	
137	Benzoic Acid	2.10E-12	3.10E-11	1.60E-01	4.96E-12	1.05E-11	1.55E-11	1.53E-15	7.19E-16	
138	Benzonitrile	4.59E-11	6.77E-10	2.42E-01	1.64E-10	2.30E-10	3.94E-10	3.88E-14	1.83E-14	
139	Benzothiazole	1.96E-14	2.88E-13	1.33E-01	3.83E-14	9.80E-14	1.36E-13	1.34E-17	6.32E-18	
140	Bis(2-ethylhexyl)phthalate	1.15E-14	1.70E-13	1.68E-05	2.86E-18	5.78E-14	5.78E-14	5.70E-18	2.68E-18	
141	Carbazole	9.42E-14	1.39E-12	2.40E-02	3.34E-14	4.72E-13	5.06E-13	4.99E-17	2.35E-17	
142	4-Chloroaniline	5.39E-15	7.96E-14	1.69E-01	1.34E-14	2.70E-14	4.05E-14	3.99E-18	1.88E-18	
143	4-Chlorobiphenyl	1.33E-14	1.96E-13	2.80E-03	5.49E-16	6.66E-14	6.71E-14	3.32E-19	1.56E-19	
144	4,4'-Chlorobiphenyl	6.69E-16	9.87E-15	1.13E-03	1.11E-17	3.35E-15	3.36E-15	3.32E-19	1.56E-19	
145	Chloroethane	4.76E-13	7.03E-12	2.66E-01	1.87E-12	2.39E-12	2.42E-13	4.20E-16	1.97E-16	
146	Dibenzofuran	4.19E-13	6.18E-12	7.93E-03	4.90E-14	2.10E-12	2.15E-12	2.12E-16	9.97E-17	
147	1,2-Dichloroethane	4.82E-14	7.11E-13	2.69E-01	1.92E-13	2.42E-13	4.33E-13	4.27E-17	2.01E-17	
148	Dieldrin	4.78E-16	7.05E-15	4.93E-04	3.47E-18	2.39E-15	2.40E-15	2.36E-19	1.11E-19	
149	Hexachlorobenzene	1.26E-12	1.86E-11	1.31E-03	2.43E-14	6.33E-12	6.35E-12	6.26E-16	2.95E-16	
150	Hydrazine	1.63E-09	2.41E-08	1.19E+02	2.86E-06	8.18E-09	2.87E-06	2.83E-10	1.33E-10	
151	Lindane	2.22E-16	3.27E-15	2.37E-02	7.76E-17	1.11E-15	1.19E-15	1.17E-19	5.52E-20	
152	Malathion	6.56E-16	9.67E-15	4.10E-02	3.96E-16	3.29E-15	3.68E-15	3.63E-19	1.71E-19	
153	Methyl ethyl ketone	8.10E-14	1.19E-12	1.37E+00	1.64E-12	4.06E-13	2.05E-12	2.02E-16	9.50E-17	
154	4-Methylphenol	7.35E-14	1.08E-12	1.46E-01	1.58E-13	3.68E-13	5.26E-13	5.19E-17	2.44E-17	
155	Monomethyl hydrazine	5.14E-10	7.59E-09	1.19E+02	9.03E-07	2.58E-09	9.05E-07	8.93E-11	4.20E-11	
156	Naphthalene	8.67E-15	1.28E-13	2.22E-02	2.84E-15	4.35E-14	4.63E-14	4.57E-18	2.15E-18	
157	Naphthalene carbonitrile	4.59E-11	6.77E-10	2.22E-02	1.50E-11	2.30E-10	2.45E-10	2.41E-14	1.14E-14	
158	n-Nitrosodimethylamine	5.23E-13	7.72E-12	4.82E+00	3.72E-11	2.62E-12	3.99E-11	3.93E-15	1.85E-15	
159	PAHs									
160	Acenaphthalene	2.09E-12	3.08E-11	8.48E-03	2.61E-13	1.05E-11	1.07E-11	1.06E-15	4.98E-16	
161	Acenaphthene	2.09E-12	3.08E-11	1.04E-02	3.19E-13	1.05E-11	1.08E-11	1.06E-15	5.00E-16	
162	Benzo(a)pyrene	4.19E-12	6.18E-11	3.68E-04	2.27E-14	2.10E-11	2.10E-11	2.07E-15	9.75E-16	
163	Chrysene	4.19E-13	6.18E-12	8.53E-04	5.27E-15	2.10E-12	2.10E-12	2.08E-16	9.77E-17	
164	Dibenzo(a,h)anthracene	4.19E-12	6.18E-11	3.30E-04	2.04E-14	2.10E-11	2.10E-11	2.07E-15	9.75E-16	
165	Fluoranthene	4.19E-12	6.18E-11	1.83E-03	1.13E-13	2.10E-11	2.11E-11	2.08E-15	9.79E-16	
166	Fluorene	4.19E-13	6.18E-12	5.60E-03	3.46E-14	2.10E-12	2.13E-12	2.10E-16	9.90E-17	
167	Phenanthrene	1.63E-15	2.41E-14	4.35E-03	1.05E-16	8.18E-15	8.28E-15	8.17E-19	3.84E-19	
168	Pyrene	8.38E-12	1.24E-10	1.93E-03	2.38E-13	4.20E-11	4.22E-11	4.16E-15	1.96E-15	
169	Parathion	1.04E-15	1.53E-14	1.20E-02	1.84E-16	5.20E-15	5.39E-15	5.31E-19	2.50E-19	
170	Pentachlorobenzene	5.14E-13	7.59E-12	2.20E-03	1.67E-14	2.58E-12	2.60E-12	2.56E-16	1.20E-16	
171	Phenol	8.23E-15	1.21E-13	2.77E-01	3.36E-14	4.13E-14	7.49E-14	7.38E-18	3.47E-18	
172	Quinoline	4.72E-13	6.96E-12	1.29E-01	9.00E-13	2.36E-12	3.26E-12	3.22E-16	1.51E-16	
173	Tetrachlorobenzene	2.53E-13	3.73E-12	5.68E-03	2.12E-14	1.27E-12	1.29E-12	1.27E-16	5.98E-17	
174	Trichlorobenzene	1.28E-13	1.89E-12	9.56E-03	1.81E-14	6.42E-13	6.60E-13	6.51E-17	3.06E-17	
175	Unsym. dimethyl hydrazine	2.03E-09	2.99E-08	4.93E+01	1.47E-06	1.02E-08	1.48E-06	1.46E-10	6.89E-11	
176	Vapona	4.10E-15	6.05E-14	3.00E-01	1.81E-14	2.06E-14	3.87E-14	3.82E-18	1.80E-18	

117	B	C	AE	AF	AG	AH	AI	AJ	AK	AL
118	BASE CASE		TABLE 11							
177										
178	INORGANICS									
179	Arsenic		5.53E-11	8.15E-10	2.00E-03	1.63E-12	2.77E-10	2.79E-10	2.75E-14	1.29E-14
180	Cadmium		3.20E-13	4.73E-12	2.75E-02	1.30E-13	1.61E-12	1.74E-12	1.71E-16	8.06E-17
181	Mercury		2.07E-12	3.06E-11	4.50E-02	1.38E-12	1.04E-11	1.18E-11	1.16E-15	5.46E-16
182										
183										
184										
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186										
187										
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197										
198										
199										

$$VSDF = r * (1 - e^{-Y * K})$$

$$Cs = VSDF * Deposition * mgg / secyr$$

$$Cu = PUF * Csoil$$

$$EDI = (Cs + Cu) * ADILET * HG / ADWT$$

ADULT
 1.19E+02
 7.00E+01
 1.50E-01 r lettuce
 5.78E-07 k lettuce, 1/s
 5.62E+06 t lettuce, s
 1.58E+00 y lettuce, Kg/M2
 1.58E+05 VSDF lettuce, M2s/Kg
 5.80E-01 FRACT. CONSUMED FROM RURAL SOURCE.
 3.15E+07 sec/yr
 1.00E+03 mg/g
 -kt

CHILD
 1.24E-03 LETTUCE INGESTION RATE, Kg/day
 1.55E+01 BODY WEIGHT, KG
 1.50E-01 r lettuce
 5.78E-07 k lettuce, 1/s
 5.62E+06 t lettuce, s
 1.58E+00 y lettuce, Kg/M2
 1.58E+05 VSDF lettuce, M2s/Kg
 5.80E-01 FRACT. CONSUMED FROM RURAL SOURCE.
 3.15E+07 sec/yr
 1.00E+03 mg/g
 -kt

ADILET
 ADWT
 r
 k
 t
 y
 VSDF
 HG
 secyr
 mgg

117	B	C	AO	AP	AQ	AR	AS	AT	AU
118	BASE CASE	TABLE 12	AO	AP	AQ	AR	AS	AT	AU
119		CARROT CONSUMPTION - AVERAGE							
120									
121									
122									
123									
124									
125									
126									
127									
128									
129									
130	ORGANICS								
131	Acetonitrile	2.44E-09	-0.34	2.2	2.68E+01	6.52E-08	6.33E-12	9.47E-12	6.07E-18
132	Aldrin	3.78E-15	7.4	96000	1.11E+01	4.18E-14	4.05E-18	6.07E-18	6.07E-18
133	Aniline	1.37E-10	0.9	73.553	9.28E-01	1.27E-10	1.23E-14	1.85E-14	1.85E-14
134	Atrazine	8.46E-13	2.68	320	9.50E-01	8.04E-13	7.79E-17	1.17E-16	1.17E-16
135	Benzaldehyde	6.24E-11	1.48	152	5.73E-01	3.58E-11	3.47E-15	5.19E-15	5.19E-15
136	Benzo(a)pyrene	3.04E-10	2.67	313	9.57E-01	2.91E-10	2.82E-14	4.22E-14	4.22E-14
137	Benzoic Acid	3.06E-11	1.87	248	4.69E-01	1.43E-11	1.39E-15	2.08E-15	2.08E-15
138	Benzonitrile	6.67E-10	1.56	168	5.45E-01	3.63E-10	3.52E-14	5.28E-14	5.28E-14
139	Benzothiazole	2.84E-13	2.01	295.42	4.50E-01	1.28E-13	1.24E-17	1.86E-17	1.86E-17
140	Bis(2-ethylhexyl)phthalate	1.68E-13	8.73	1336965	8.39E+00	1.41E-12	1.36E-16	2.04E-16	2.04E-16
141	Carbazole	1.37E-12	3.29	1193	6.57E-01	9.00E-13	8.73E-17	1.31E-16	1.31E-16
142	4-Chloroaniline	7.84E-14	1.83	349.5	3.21E-01	2.52E-14	2.44E-18	3.66E-18	3.66E-18
143	4-Chlorobiphenyl	1.93E-13	4.9	38486	3.29E-01	6.36E-14	6.17E-18	9.23E-18	9.23E-18
144	4,4'-Chlorobiphenyl	9.73E-15	5.58	166901	2.53E-01	2.46E-15	2.38E-19	3.57E-19	3.57E-19
145	Chloroethane	6.95E-12	1.49	143	6.13E-01	4.24E-12	4.11E-16	6.16E-16	6.16E-16
146	Dibenzofuran	6.09E-12	4.12	7152	4.50E-01	2.74E-12	2.66E-16	3.98E-16	3.98E-16
147	1,2-Dichloroethane	7.01E-13	1.48	14	6.22E+00	4.36E-12	4.23E-16	6.33E-16	6.33E-16
148	Dieldrin	6.95E-15	6.2	1700	7.44E+01	5.17E-13	5.01E-17	7.50E-17	7.50E-17
149	Hexachlorobenzene	1.84E-11	5.47	50000	6.94E-01	1.27E-11	1.24E-15	1.85E-15	1.85E-15
150	Hydrazine	2.37E-08	-3.08	0.1	5.78E+02	1.37E-05	1.33E-09	1.99E-09	1.99E-09
151	Lindane	3.23E-15	3.3	1000	7.97E-01	2.57E-15	2.49E-19	3.73E-19	3.73E-19
152	Malathion	9.53E-15	2.89	1800	2.31E-01	2.20E-15	2.13E-19	3.19E-19	3.19E-19
153	Methyl ethyl ketone	1.18E-12	0.26	4.5	1.36E+01	1.60E-11	1.55E-15	2.32E-15	2.32E-15
154	4-Methylphenol	1.07E-12	1.94	49	2.53E+00	2.71E-12	2.62E-16	3.93E-16	3.93E-16
155	Monomethyl hydrazine	7.48E-09	-3.08	0.503	1.15E+02	8.59E-07	8.33E-11	1.25E-10	1.25E-10
156	Naphthalene	1.26E-13	3.35	871	9.94E-01	1.25E-13	1.21E-17	1.82E-17	1.82E-17
157	Naphthalene carbonitrile	6.67E-10	3.35	871	9.94E-01	6.63E-10	6.42E-14	9.62E-14	9.62E-14
158	n-Nitrosodimethylamine	7.61E-12	-0.68	0.1	5.84E+02	4.44E-09	4.31E-13	6.45E-13	6.45E-13
159	PAHs								
160	Acenaphthalene	3.04E-11	4.07	2500	1.18E+00	3.58E-11	3.47E-15	5.20E-15	5.20E-15
161	Acenaphthene	3.04E-11	3.92	4600	4.95E-01	1.50E-11	1.46E-15	2.18E-15	2.18E-15
162	Benzo(a)pyrene	6.09E-11	6.42	5500000	3.40E-02	2.07E-12	2.01E-16	3.00E-16	3.00E-16
163	Chrysene	6.09E-12	5.79	200000	3.06E-01	1.86E-12	1.81E-16	2.70E-16	2.70E-16
164	Dibenzo(a,h)anthracene	6.09E-11	6.5	3300000	6.52E-02	3.97E-12	3.85E-16	5.77E-16	5.77E-16
165	Fluoranthene	6.09E-11	5.22	38000	5.87E-01	3.57E-11	3.47E-15	5.19E-15	5.19E-15
166	Fluorene	6.09E-12	4.38	7300	6.95E-01	4.23E-12	4.10E-16	6.15E-16	6.15E-16
167	Phenanthrene	2.37E-14	4.57	14000	5.06E-01	1.20E-14	1.16E-18	1.74E-18	1.74E-18
168	Pyrene	1.22E-10	5.18	38000	5.47E-01	6.66E-11	6.46E-15	9.67E-15	9.67E-15
169	Parathion	1.51E-14	3.81	3664	5.14E-01	7.76E-15	7.52E-19	1.13E-18	1.13E-18
170	Pentachlorobenzene	7.48E-12	5.08	13000	1.34E+00	1.00E-11	9.71E-16	1.45E-15	1.45E-15
171	Phenol	1.20E-13	1.46	14	6.15E+00	7.36E-13	7.13E-17	1.07E-16	1.07E-16
172	Quinoline	6.85E-12	2.03	79	1.72E+00	1.18E-11	1.14E-15	1.71E-15	1.71E-15
173	Tetrachlorobenzene	3.68E-12	4.37	1600	3.12E+00	1.15E-11	1.11E-15	1.66E-15	1.66E-15
174	Trichlorobenzene	1.86E-12	3.98	9200	2.75E-01	5.11E-13	4.95E-17	7.42E-17	7.42E-17
175	Unsym. dimethyl hydrazine	2.95E-08	-2.42	0.2	2.89E+02	8.52E-06	8.26E-10	1.24E-09	1.24E-09
176	Vapona	5.96E-14	1.4	138	6.03E-01	3.60E-14	3.49E-18	5.22E-18	5.22E-18

117	B	C	TABLE 12	AO	AP	AQ	AR	AS	AT	AU
118	BASE CASE									
177										
178	INORGANICS									
179	Arsenic			8.04E-10			7.20E-04	5.79E-13	5.61E-17	8.40E-17
180	Cadmium			4.66E-12			1.80E-02	8.39E-14	8.13E-18	1.22E-17
181	Mercury			3.01E-11			2.40E-02	7.23E-13	7.01E-17	1.05E-16

ADULT CHILD
 1.42E-02 1.42E-02 SOIL ORGANIC CARBON CONTENT
 0.0117 0.00388 CARROT INGESTION RATE ,Kg/day
 7.00E+01 1.55E+01 BODY WEIGHT, KG
 5.80E-01 5.80E-01 FRACTION OF CARROTS HOME GROWN

$$\log(RCF-0.82) = 0.77 \log Kow - 1.52$$

$$RUF = RCF$$

$$(Koc * Foc)$$

$$C_{plant} = RUF * C_{soil}$$

$$EDI = C_{plant} * ADICAR * HG / ADWT$$

$$EDI (total) = DI_{tomato} + DI_{lettuce} + DI_{carrot}$$

Foc
 ADICAR
 ADWT
 HG

191
 192
 193
 194
 195
 196

117	B	BASE CASE	C	AW	AX	AY	AZ	BA	BB	BC
118				TABLE 13						
119				CARROT CONSUMPTION - MAXIMUM						
120										
121										
122				18-Jun-91						
123				14:11:47						
124				C soil						
125				MAXIMUM						
126				CALCULATED						
127				CONC IN						
128				SOIL						
129				-2M						
				mg/Kg						
130	ORGANICS									
131	Acetonitrile			2.47E-09	-3.40E-01	2.20E+00	2.68E+01	6.62E-08	6.42E-12	9.61E-12
132	Aldrin			3.84E-15	7.40E+00	9.60E+04	1.11E+01	4.24E-14	4.11E-18	6.16E-18
133	Aniline			1.39E-10	9.00E-01	7.36E+01	9.28E-01	1.29E-10	1.25E-14	1.87E-14
134	Atrazine			8.59E-13	2.68E+00	3.20E+02	9.50E-01	8.16E-13	7.91E-17	1.18E-16
135	Benzaldehyde			6.33E-11	1.48E+00	1.52E+02	5.73E-01	3.63E-11	3.52E-15	5.27E-15
136	Benzofuran			3.08E-10	2.67E+00	3.13E+02	9.57E-01	2.86E-14	2.86E-14	4.28E-14
137	Benzoic Acid			3.10E-11	1.87E+00	2.48E+02	4.69E-01	1.45E-11	1.41E-15	2.11E-15
138	Benzonitrile			6.77E-10	1.56E+00	1.68E+02	5.45E-01	3.69E-10	3.57E-14	5.35E-14
139	Benzothiazole			2.88E-13	2.01E+00	2.95E+02	4.50E-01	1.30E-13	1.26E-17	1.88E-17
140	Bis(2-ethylhexyl)phthalate			1.70E-13	8.73E+00	1.34E+06	8.39E+00	1.43E-12	1.38E-16	2.07E-16
141	Carbazole			1.39E-12	3.29E+00	1.19E+03	6.57E-01	9.13E-13	8.85E-17	1.33E-16
142	4-Chloroaniline			7.96E-14	1.83E+00	3.50E+02	3.21E-01	2.56E-14	2.48E-18	3.71E-18
143	4-Chlorobiphenyl			1.96E-13	4.90E+00	3.85E+04	3.29E-01	6.45E-14	6.25E-18	9.37E-18
144	4,4'-Chlorobiphenyl			9.87E-15	5.58E+00	1.67E+05	2.53E-01	2.49E-15	2.42E-19	3.62E-19
145	Chloroethane			7.03E-12	1.49E+00	1.43E+02	6.13E-01	4.30E-12	4.17E-16	6.25E-16
146	Dibenzofuran			6.18E-12	4.12E+00	7.15E+03	4.50E-01	2.78E-12	2.70E-16	4.04E-16
147	1,2-Dichloroethane			7.11E-13	1.48E+00	1.40E+01	6.22E+00	4.42E-12	4.29E-16	6.42E-16
148	Dieldrin			7.05E-15	6.20E+00	1.70E+03	7.44E-01	5.24E-13	5.08E-17	7.61E-17
149	Hexachlorobenzene			1.86E-11	5.47E+00	5.00E+04	6.94E-01	1.29E-11	1.25E-15	1.88E-15
150	Hydrazine			2.41E-08	3.08E+00	1.00E-01	5.78E+02	1.39E-05	1.35E-09	2.02E-09
151	Lindane			3.27E-15	3.30E+00	1.00E+03	7.97E-01	2.61E-15	2.53E-19	3.79E-19
152	Malathion			9.67E-15	2.89E+00	1.80E+03	2.31E-01	2.23E-15	2.16E-19	3.24E-19
153	Methyl ethyl ketone			1.19E-12	2.60E-01	4.50E+00	1.36E+01	1.62E-11	1.57E-15	2.36E-15
154	4-Methylphenol			1.08E-12	1.94E+00	4.90E+01	2.53E+00	2.74E-12	2.66E-16	3.99E-16
155	Monomethyl hydrazine			7.59E-09	3.08E+00	5.03E-01	1.15E+02	8.71E-07	8.45E-11	1.27E-10
156	Naphthalene			1.28E-13	3.35E+00	8.71E+02	9.94E-01	1.27E-13	1.23E-17	1.85E-17
157	Naphthalene carbonitrile			6.77E-10	3.35E+00	8.71E+02	9.94E-01	6.72E-10	6.52E-14	9.76E-14
158	n-Nitrosodimethylamine			7.72E-12	-6.80E-01	1.00E-01	5.84E+02	4.51E-09	4.37E-13	6.54E-13
159	PAHs									
160	Acenaphthalene			3.08E-11	4.07E+00	2.50E+03	1.18E+00	3.64E-11	3.53E-15	5.28E-15
161	Acenaphthene			3.08E-11	3.92E+00	4.60E+03	4.95E-01	1.52E-11	1.48E-15	2.21E-15
162	Benzo(a)pyrene			6.18E-11	6.42E+00	5.50E+06	3.40E-02	2.10E-12	2.03E-16	3.05E-16
163	Chrysene			6.18E-12	5.79E+00	2.00E+05	3.06E-01	1.89E-12	1.83E-16	2.74E-16
164	Dibenzo(a,h)anthracene			6.18E-11	6.50E+00	3.30E+06	6.52E-02	4.03E-12	3.91E-16	5.85E-16
165	Fluoranthene			6.18E-11	5.22E+00	3.80E+04	5.87E-01	3.63E-11	3.52E-15	5.26E-15
166	Fluorene			6.18E-12	4.58E+00	7.30E+03	6.95E-01	4.29E-12	4.16E-16	6.24E-16
167	Phenanthrene			2.41E-14	4.57E+00	1.40E+04	5.06E-01	1.22E-14	1.18E-18	1.77E-18
168	Pyrene			1.24E-10	5.18E+00	3.80E+04	5.47E-01	6.76E-11	6.55E-15	9.81E-15
169	Parathion			1.53E-14	5.81E+00	3.66E+03	5.14E-01	7.87E-15	7.63E-19	1.14E-18
170	Pentachlorobenzene			7.59E-12	5.08E+00	1.30E+04	1.34E+00	1.02E-11	9.85E-16	1.48E-15
171	Phenol			1.21E-13	1.46E+00	1.40E+01	6.15E+00	7.46E-13	7.24E-17	1.08E-16
172	Quinoline			6.96E-12	2.03E+00	7.90E+01	1.72E+00	1.19E-11	1.16E-15	1.73E-15
173	Tetrachlorobenzene			3.73E-12	4.37E+00	1.60E+03	3.12E+00	1.16E-11	1.13E-15	1.69E-15
174	Trichlorobenzene			1.89E-12	3.98E+00	9.20E+03	2.75E-01	5.18E-13	5.03E-17	7.53E-17
175	Unsym. dimethyl hydrazine			2.99E-08	-2.42E+00	2.00E-01	2.89E+02	8.64E-06	8.38E-10	1.26E-09
176	Vapona			6.05E-14	1.40E+00	1.38E+02	6.03E-01	3.65E-14	3.54E-18	5.50E-18

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	AW	AX	AY	AZ	BA	BB	BC
118	BASE CASE								
177	TABLE 13								
178	INORGANICS								
179	Arsenic		8.15E-10			7.20E-04	5.87E-13	5.69E-17	8.52E-17
180	Cadmium		4.73E-12			1.80E-02	8.51E-14	8.25E-18	1.24E-17
181	Mercury		3.06E-11			2.40E-02	7.34E-13	7.11E-17	1.07E-16

ADULT CHILD
 1.42E-02 1.42E-02 SOIL ORGANIC CARBON CONTENT
 1.17E-02 3.88E-03 INGESTION RATE, Kg/day
 7.00E+01 1.55E+01 BODY WEIGHT, KG
 5.80E-01 5.80E-01 FRACTION OF CARROTS HOMEGROWN

$$\log(\text{RCF}-0.82) = 0.77 \log \text{Kow} - 1.52$$

$$\text{RUF} = \text{RCF}$$

$$\text{Cplant} = (\text{Koc} * \text{Foc})$$

$$\text{EDI} = \text{C plant} * \text{ADICAR} * \text{HG} / \text{ADWT}$$

$$\text{EDI (total)} = \text{DI tomato} + \text{DI lettuce} + \text{DI carrot}$$

Foc
 ADICAR
 ADWT
 HG

182
183
184
185
186
187
188
189
190
191
192
193
194
195
196

117	B	C	BE	BF	BG	BH
118	BASE CASE		TABLE 14			
119			TOTAL VEGETABLE CONSUMPTION			
120			(carrots, lettuce, and tomatoes)			
121						
122						
123						
124						
125						
126						
127						
128						
129						
130	ORGANICS					
131	Acetonitrile		1.18E-11	1.23E-11	2.11E-11	2.19E-11
132	Aldrin		4.07E-18	4.59E-18	6.10E-18	7.04E-18
133	Aniline		7.17E-14	8.93E-14	1.44E-13	1.77E-13
134	Atrazine		1.15E-16	2.19E-16	1.94E-16	3.87E-16
135	Benzaldehyde		1.60E-14	2.39E-14	3.18E-14	4.63E-14
136	Benzofuran		4.15E-14	7.89E-14	7.02E-14	1.39E-13
137	Benzoic Acid		5.09E-15	8.88E-15	9.89E-15	1.69E-14
138	Benzonitrile		1.56E-13	2.39E-13	3.08E-13	4.63E-13
139	Benzothiazole		4.11E-17	7.62E-17	7.91E-17	1.44E-16
140	Bis(2-ethylhexyl)phthalate		1.37E-16	1.59E-16	2.05E-16	2.46E-16
141	Carbazole		1.16E-16	2.84E-16	1.91E-16	5.02E-16
142	4-Chloroaniline		1.25E-17	2.22E-17	2.48E-17	4.28E-17
143	4-Chlorobiphenyl		7.25E-18	3.08E-17	1.14E-17	5.50E-17
144	4,4'-Chlorobiphenyl		2.81E-19	1.46E-18	4.38E-19	2.63E-18
145	Chloroethane		1.79E-15	2.66E-15	3.53E-15	5.13E-15
146	Dibenzofuran		3.23E-16	1.07E-15	5.14E-16	1.89E-15
147	1,2-Dichloroethane		5.64E-16	6.57E-16	9.32E-16	1.10E-15
148	Dieldrin		5.01E-17	5.17E-17	7.51E-17	7.77E-17
149	Hexachlorobenzene		1.32E-15	3.56E-15	2.01E-15	6.17E-15
150	Hydrazine		3.40E-09	3.45E-09	6.38E-09	6.48E-09
151	Lindane		3.17E-19	7.13E-19	5.14E-19	1.25E-18
152	Malathion		5.34E-19	1.70E-18	9.90E-19	3.15E-18
153	Methyl ethyl ketone		2.74E-15	2.93E-15	4.85E-15	5.18E-15
154	4-Methylphenol		3.81E-16	5.16E-16	6.42E-16	8.92E-16
155	Monomethyl hydrazine		7.37E-10	7.49E-10	1.51E-09	1.53E-09
156	Naphthalene		1.47E-17	3.02E-17	2.34E-17	5.21E-17
157	Naphthalene carbonitrile		7.79E-14	1.59E-13	1.24E-13	2.75E-13
158	n-Nitrosodimethylamine		4.58E-13	4.65E-13	7.02E-13	7.14E-13
159	PAHs					
160	Acenaphthalene		3.77E-15	7.51E-15	5.81E-15	1.27E-14
161	Acenaphthene		1.80E-15	5.50E-15	2.87E-15	9.74E-15
162	Benzo(a)pyrene		4.34E-16	7.83E-15	7.38E-16	1.44E-14
163	Chrysene		2.06E-16	9.48E-16	3.19E-16	1.69E-15
164	Dibenzo(a,h)anthracene		6.17E-16	8.01E-15	1.01E-15	1.47E-14
165	Fluoranthene		3.76E-15	1.12E-14	5.77E-15	1.95E-14
166	Fluorene		4.57E-16	1.20E-15	7.08E-16	2.09E-15
167	Phenanthrene		1.32E-18	4.22E-18	2.06E-18	7.42E-18
168	Pyrene		7.06E-15	2.19E-14	1.08E-14	3.84E-14
169	Parathion		9.39E-19	2.78E-18	1.51E-18	4.92E-18
170	Pentachlorobenzene		1.01E-15	1.93E-15	1.53E-15	3.23E-15
171	Phenol		9.61E-17	1.12E-16	1.59E-16	1.88E-16
172	Quinoline		1.82E-15	2.68E-15	3.13E-15	4.72E-15
173	Tetrachlorobenzene		1.14E-15	1.60E-15	1.72E-15	2.57E-15
174	Trichlorobenzene		6.93E-17	2.96E-16	1.14E-16	5.34E-16
175	Unsym. dimethyl hydrazine		1.89E-09	1.93E-09	3.50E-09	3.55E-09
176	Vapona		1.68E-17	2.43E-17	3.34E-17	4.73E-17

18-Jun-91
14:11:47

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	BE	BF	BG	BH
118	BASE CASE		TABLE 14			
177						
178	INORGANICS					
179	Arsenic		3.24E-15	1.01E-13	5.84E-15	1.87E-13

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

B		C	TABLE 15				BK		BL		BM			
BASE CASE			SOIL/DUST INGESTION CHILD											
			C soil		EDI		C soil		EDI		C soil		EDI	
			CALCULATED		ESTIMATED		CALCULATED		ESTIMATED		CALCULATED		ESTIMATED	
			CONC IN		DAILY		CONC IN		DAILY		CONC IN		DAILY	
			SOIL		INTAKE		SOIL		INTAKE		SOIL		INTAKE	
			.1M		mg/Kg/day		.1M		mg/Kg/day		.1M		mg/Kg/day	
			mg/Kg		mg/Kg/day		mg/Kg		mg/Kg/day		mg/Kg		mg/Kg/day	

117	B	C	BJ	BK	BL	BM
118	BASE CASE		TABLE 15			
177						
178	INORGANICS					
179	Arsenic		1.61E-09	2.07E-14	1.63E-09	2.10E-14
180	Cadmium		9.32E-12	1.20E-16	9.45E-12	1.22E-16
181	Mercury		6.03E-11	7.78E-16	6.11E-11	7.89E-16
182						
183						
184						
185						
186						
187						
188						
189						
190						
191						
192						
193						

0.2 Soil/dust ingestion rate (g/day)
 15.5 Body weight (Kg)
 365 days/yr
 365000 g/Kg*day/yr

$$EDI = C_{soil} * SIR * EF / BW / CF$$

BP
80
TABLE 16
SOIL INGESTION ADULT

18-Jun-91 14:11:47		-----AVERAGE-----			-----MAXIMUM-----		
		C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI DAILY INTAKE mg/Kg/day		C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI DAILY INTAKE mg/Kg/day	
122							
123							
124							
125							
126							
127							
128							
129							
130	ORGANICS						
131	Acetonitrile	4.87E-09	6.96E-15		4.94E-09	7.06E-15	
132	Aldrin	7.57E-15	1.08E-20		7.68E-15	1.10E-20	
133	Aniline	2.74E-10	3.91E-16		2.78E-10	3.97E-16	
134	Atrazine	1.69E-12	2.42E-18		1.72E-12	2.45E-18	
135	Benzaldehyde	1.25E-10	1.78E-16		1.27E-10	1.81E-16	
136	Benzofuran	6.07E-10	8.67E-16		6.16E-10	8.80E-16	
137	Benzoic Acid	6.11E-11	8.73E-17		6.20E-11	8.86E-17	
138	Benzonitrile	1.33E-09	1.91E-15		1.35E-09	1.93E-15	
139	Benzothiazole	5.69E-13	8.12E-19		5.77E-13	8.24E-19	
140	Bis(2-ethylhexyl)phthalate	3.36E-13	4.79E-19		3.40E-13	4.86E-19	
141	Carbazole	2.74E-12	3.91E-18		2.78E-12	3.97E-18	
142	4-Chloroaniline	1.57E-13	2.24E-19		1.59E-13	2.27E-19	
143	4-Chlorobiphenyl	3.86E-13	5.52E-19		3.92E-13	5.60E-19	
144	4,4'-Chlorobiphenyl	1.95E-14	2.78E-20		1.97E-14	2.82E-20	
145	Chloroethane	1.39E-11	1.98E-17		1.41E-11	2.01E-17	
146	Dibenzofuran	1.22E-11	1.74E-17		1.24E-11	1.77E-17	
147	1,2-Dichloroethane	1.40E-12	2.00E-18		1.42E-12	2.03E-18	
148	Dieldrin	1.39E-14	1.98E-20		1.41E-14	2.01E-20	
149	Hexachlorobenzene	3.67E-11	5.25E-17		3.73E-11	5.32E-17	
150	Hydrazine	4.75E-08	6.78E-14		4.81E-08	6.88E-14	
151	Lindane	6.46E-15	9.22E-21		6.55E-15	9.36E-21	
152	Malathion	1.91E-14	2.72E-20		1.93E-14	2.76E-20	
153	Methyl ethyl ketone	2.36E-12	3.36E-18		2.39E-12	3.41E-18	
154	4-Methylphenol	2.14E-12	3.05E-18		2.17E-12	3.10E-18	
155	Monomethyl hydrazine	1.50E-08	2.14E-14		1.52E-08	2.17E-14	
156	Naphthalene	2.52E-13	3.60E-19		2.56E-13	3.66E-19	
157	Naphthalene carbonitrile	1.33E-09	1.91E-15		1.35E-09	1.93E-15	
158	n-Nitrosodimethylamine	1.52E-11	2.17E-17		1.54E-11	2.21E-17	
159	PAHS						
160	Acenaphthalene	6.07E-11	8.67E-17		6.16E-11	8.80E-17	
161	Acenaphthene	6.07E-11	8.67E-17		6.16E-11	8.80E-17	
162	Benzo(a)pyrene	1.22E-10	1.74E-16		1.24E-10	1.77E-16	
163	Chrysene	1.22E-11	1.74E-17		1.24E-11	1.77E-17	
164	Dibenzo(a,h)anthracene	1.22E-10	1.74E-16		1.24E-10	1.77E-16	
165	Fluoranthene	1.22E-10	1.74E-16		1.24E-10	1.77E-16	
166	Fluorene	1.22E-11	1.74E-17		1.24E-11	1.77E-17	
167	Phenanthrene	4.73E-14	6.78E-20		4.81E-14	6.88E-20	
168	Pyrene	2.44E-10	3.48E-16		2.47E-10	3.53E-16	
169	Parathion	3.02E-14	4.31E-20		3.06E-14	4.37E-20	
170	Pentachlorobenzene	1.50E-11	2.14E-17		1.52E-11	2.17E-17	
171	Phenol	2.39E-13	3.42E-19		2.43E-13	3.47E-19	
172	Quinoline	1.37E-11	1.96E-17		1.39E-11	1.99E-17	
173	Tetrachlorobenzene	7.35E-12	1.05E-17		7.46E-12	1.07E-17	
174	Trichlorobenzene	3.72E-12	5.32E-18		3.78E-12	5.40E-18	
175	Unsym. dimethyl hydrazine	5.90E-08	8.43E-14		5.98E-08	8.55E-14	
176	Vapona	1.19E-13	1.70E-19		1.21E-13	1.73E-19	

117	B	C	BO	BP	BQ	BR
118	BASE CASE		TABLE 16			
177						
178	INORGANICS					
179	Arsenic		1.61E-09	2.30E-15	1.63E-09	2.33E-15
180	Cadmium		9.32E-12	1.33E-17	9.45E-12	1.35E-17
181	Mercury		6.03E-11	8.61E-17	6.11E-11	8.74E-17
182						
183						
184						
185						
186						
187						
188						
189						
190						
191						
192						
193						

0.1 Soil ingestion rate (g/day)
70 Body weight (Kg)
365 days/yr
365000 g/Kg*day/yr

$$EDI = C_{soil} * SIR * EF / BW / CF$$

202 203 204 205 206 207 208 209 210 211 212 213	B BASE CASE	C	TABLE 17 CONTAMINANT CONCENTRATION IN GRAIN				G	H
			D	E	F			
			18-Jun-91 14:11:47	C soil AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	C soil MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	PUF PLANT UPTAKE FACTOR	Cu AVERAGE CALCULATED CONC. IN GRAIN mg/Kg	Cu MAXIMUM CALCULATED CONC. IN GRAIN mg/Kg
214	ORGANICS							
215	Acetonitrile		2.37E-09	2.40E-09	6.13E+01	1.45E-07	1.47E-07	
216	Aldrin		3.67E-15	3.73E-15	1.99E-03	7.29E-18	7.40E-18	
217	Aniline		1.33E-10	1.35E-10	1.17E+01	1.56E-09	1.58E-09	
218	Atrazine		8.22E-13	8.34E-13	1.09E+00	8.92E-13	9.05E-13	
219	Benzaldehyde		6.06E-11	6.15E-11	5.39E+00	3.27E-10	3.31E-10	
220	Benzofuran		2.95E-10	2.99E-10	1.10E+00	3.24E-10	3.29E-10	
221	Benzoic Acid		2.97E-11	3.01E-11	3.20E+00	9.50E-11	9.64E-11	
222	Benzonitrile		6.47E-10	6.57E-10	4.84E+00	3.14E-09	3.18E-09	
223	Benzothiazole		2.76E-13	2.80E-13	2.66E+00	7.33E-13	7.44E-13	
224	Bis(2-ethylhexyl)phthalate		1.63E-13	1.65E-13	3.36E-04	5.48E-17	5.56E-17	
225	Carbazole		1.33E-12	1.35E-12	4.81E-01	6.39E-13	6.49E-13	
226	4-Chloroaniline		7.62E-14	7.73E-14	3.38E+00	2.57E-13	2.61E-13	
227	4-Chlorobiphenyl		1.88E-13	1.90E-13	5.60E-02	1.05E-14	1.07E-14	
228	4,4'-Chlorobiphenyl		9.44E-15	9.58E-15	2.26E-02	2.13E-16	2.16E-16	
229	Chloroethane		6.72E-12	6.82E-12	5.32E+00	3.58E-11	3.63E-11	
230	Dibenzofuran		5.91E-12	6.00E-12	1.59E-01	9.38E-13	9.52E-13	
231	1,2-Dichloroethane		6.81E-13	6.91E-13	5.39E+00	3.67E-12	3.72E-12	
232	Dieldrin		6.74E-15	6.84E-15	9.86E-03	6.65E-17	6.75E-17	
233	Hexachlorobenzene		1.78E-11	1.81E-11	2.61E-02	4.66E-13	4.73E-13	
234	Hydrazine		2.30E-08	2.34E-08	2.38E+03	5.48E-05	5.56E-05	
235	Lindane		3.13E-15	3.18E-15	4.74E-01	1.49E-15	1.51E-15	
236	Malathion		9.26E-15	9.39E-15	8.20E-01	7.59E-15	7.70E-15	
237	Methyl ethyl ketone		1.14E-12	1.16E-12	2.75E+01	3.14E-11	3.19E-11	
238	4-Methylphenol		1.04E-12	1.05E-12	2.92E+00	3.03E-12	3.07E-12	
239	Monomethyl hydrazine		7.26E-09	7.37E-09	2.38E+03	1.75E-05	1.75E-05	
240	Naphthalene		1.22E-13	1.24E-13	4.44E-01	5.43E-14	5.51E-14	
241	Naphthalene carbonitrile		6.47E-10	6.57E-10	4.44E-01	2.87E-10	2.91E-10	
242	n-Nitrosodimethylamine		7.39E-12	7.49E-12	9.65E+01	7.13E-10	7.23E-10	
243	PAHs							
244	Acenaphthalene		2.95E-11	2.99E-11	1.70E-01	5.00E-12	5.07E-12	
245	Acenaphthene		2.95E-11	2.99E-11	2.07E-01	6.11E-12	6.19E-12	
246	Benzo(a)pyrene		5.91E-11	6.00E-11	7.35E-03	4.35E-13	4.41E-13	
247	Chrysene		5.91E-12	6.00E-12	1.71E-02	1.01E-13	1.02E-13	
248	Dibenzo(a,h)anthracene		5.91E-11	6.00E-11	6.61E-03	3.96E-13	3.96E-13	
249	Fluoranthene		5.91E-11	6.00E-11	3.65E-02	2.16E-12	2.19E-12	
250	Fluorene		5.91E-12	6.00E-12	1.12E-01	6.63E-13	6.73E-13	
251	Phenanthrene		2.30E-14	2.34E-14	8.70E-02	2.00E-15	2.03E-15	
252	Pyrene		1.18E-10	1.20E-10	3.85E-02	4.55E-12	4.62E-12	
253	Parathion		1.47E-14	1.49E-14	2.40E-01	3.52E-15	3.57E-15	
254	Pentachlorobenzene		7.26E-12	7.37E-12	4.40E-02	3.20E-13	3.24E-13	
255	Phenol		1.16E-13	1.18E-13	5.54E+00	6.43E-13	6.53E-13	
256	Quinoline		6.66E-12	6.76E-12	2.59E+00	1.72E-11	1.75E-11	
257	Tetrachlorobenzene		3.57E-12	3.62E-12	1.14E-01	4.05E-13	4.11E-13	
258	Trichlorobenzene		1.81E-12	1.83E-12	1.91E-01	3.46E-13	3.51E-13	
259	Unsym. dimethyl hydrazine		2.86E-08	2.91E-08	9.85E+02	2.82E-05	2.86E-05	
260	Vapona		5.79E-14	5.87E-14	6.00E+00	3.47E-13	3.52E-13	
261								

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-JUN-91

202	B	C	D	E	F	G	H
203	BASE CASE		TABLE 17				
262	INORGANICS						
263	Arsenic		7.80E-10	7.92E-10	3.30E-03	2.57E-12	2.61E-12
264	Cadmium		4.52E-12	4.59E-12	1.00E-01	4.52E-13	4.59E-13
265	Mercury		2.93E-11	2.97E-11	2.00E-01	5.85E-12	5.94E-12

Cgrain = Csoil*RUF

266
267
268

B	BASE CASE	C	CONTAMINANT CONCENTRATION IN HAY mg/Kg										S								
			J	K	L	M	N	O	P	Q	R										
202	18-Jun-91 14:11:47	C soil AVERAGE CONC IN SOIL -2M mg/Kg	C soil MAXIMUM CALCULATED CONC IN SOIL -2M mg/Kg	D DRY DEPOSITION RATE g/M2/yr	PUF PLANT UPTAKE FACTOR	Cu AVERAGE CONC. DUE TO UPTAKE mg/Kg	Cu MAXIMUM CONC. DUE TO UPTAKE mg/Kg	Cs AVERAGE CONC. ON PLANT SURFACE mg/Kg	Cs MAXIMUM CONC. ON PLANT SURFACE mg/Kg	C hay AVERAGE CALCULATED CONC IN HAY mg/Kg	C hay MAXIMUM CALCULATED CONC IN HAY mg/Kg										
203												2.37E-09	2.40E-09	5.76E-11	6.13E+01	1.45E-07	1.47E-07	1.30E-10	4.55E-09	1.45E-07	1.52E-07
204												3.67E-15	3.73E-15	8.94E-17	1.99E-03	7.29E-18	7.40E-18	2.02E-16	7.06E-15	2.09E-16	7.07E-15
205												1.33E-10	1.35E-10	3.24E-12	1.17E+01	1.56E-09	1.58E-09	7.31E-12	2.56E-10	1.56E-09	1.83E-09
206												8.22E-13	8.34E-13	2.00E-14	1.09E+00	8.92E-13	9.05E-13	4.51E-14	1.58E-12	9.37E-13	2.48E-12
207												6.06E-11	6.15E-11	1.47E-12	5.39E+00	3.27E-10	3.31E-10	3.33E-12	1.16E-10	3.30E-10	4.48E-12
208												2.95E-10	2.99E-10	7.17E-12	1.10E+00	3.24E-10	3.29E-10	1.62E-11	5.66E-10	3.40E-10	8.95E-10
209												2.97E-11	3.01E-11	7.22E-13	3.20E+00	9.50E-11	9.64E-11	1.63E-12	5.70E-11	9.66E-11	1.53E-10
210												6.47E-10	6.57E-10	1.58E-11	4.84E+00	3.14E-09	3.18E-09	3.56E-11	1.24E-09	3.17E-09	4.43E-09
211												2.76E-13	2.80E-13	6.72E-15	2.66E+00	7.33E-13	7.44E-13	1.52E-14	5.31E-13	7.48E-13	1.27E-12
212	1.63E-13	1.65E-13	3.96E-15	3.36E-04	5.48E-17	5.56E-17	8.95E-15	3.13E-13	9.00E-15	3.13E-13											
213	1.33E-12	1.35E-12	3.24E-14	4.81E-01	6.39E-13	6.49E-13	7.31E-14	2.56E-12	7.12E-13	3.21E-12											
214	ORGANICS																				
215	Acetonitrile																				
216 <td>Aldrin</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Aldrin																				
217 <td>Aniline</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Aniline																				
218 <td>Atrazine</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Atrazine																				
219 <td>Benzaldehyde</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzaldehyde																				
220 <td>Benzofuran</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzofuran																				
221 <td>Benzoic Acid</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzoic Acid																				
222 <td>Benzonitrile</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzonitrile																				
223 <td>Benzothiazole</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzothiazole																				
224 <td>Bis(2-ethylhexyl)phthalate</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Bis(2-ethylhexyl)phthalate																				
225 <td>Carbazole</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Carbazole																				
226 <td>4-Chloroaniline</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	4-Chloroaniline																				
227 <td>4-Chlorobiphenyl</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	4-Chlorobiphenyl																				
228 <td>4,4-Chlorobiphenyl</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	4,4-Chlorobiphenyl																				
229 <td>Chloroethane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Chloroethane																				
230 <td>Dibenzofuran</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Dibenzofuran																				
231 <td>1,2-Dichloroethane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,2-Dichloroethane																				
232 <td>Diethrin</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Diethrin																				
233 <td>Hexachlorobenzene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Hexachlorobenzene																				
234 <td>Hydrazine</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Hydrazine																				
235 <td>Lindane</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Lindane																				
236 <td>Malathion</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Malathion																				
237 <td>Methyl ethyl ketone</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Methyl ethyl ketone																				
238 <td>4-Methylphenol</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	4-Methylphenol																				
239 <td>Monomethyl hydrazine</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Monomethyl hydrazine																				
240 <td>Naphthalene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Naphthalene																				
241 <td>Naphthalene carbonitrile</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Naphthalene carbonitrile																				
242 <td>n-Nitrosodimethylamine</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	n-Nitrosodimethylamine																				
243 <td>PAHs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	PAHs																				
244 <td>Acenaphthalene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Acenaphthalene																				
245 <td>Acenaphthene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Acenaphthene																				
246 <td>Benzo(a)pyrene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzo(a)pyrene																				
247 <td>Chrysene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Chrysene																				
248 <td>Dibenzo(a,h)anthracene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Dibenzo(a,h)anthracene																				
249 <td>Fluoranthene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Fluoranthene																				
250 <td>Fluorene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Fluorene																				
251 <td>Phenanthrene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Phenanthrene																				
252 <td>Pyrene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Pyrene																				
253 <td>Parathion</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Parathion																				
254 <td>Pentachlorobenzene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Pentachlorobenzene																				
255 <td>Phenol</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Phenol																				
256 <td>Quinoline</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Quinoline																				
257 <td>Tetrachlorobenzene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Tetrachlorobenzene																				
258 <td>Trichlorobenzene</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Trichlorobenzene																				
259 <td>Unsym. dimethyl hydrazine</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Unsym. dimethyl hydrazine																				
260 <td>Vapona</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Vapona																				
261 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>																					

202	B	C	J	K	L	M	N	O	P	Q	R	S
203	BASE CASE		TABLE 18									
262	INORGANICS											
263	Arsenic		7.80E-10	7.92E-10	1.90E-11	2.00E-01	1.56E-10	1.58E-10	4.29E-11	1.50E-09	1.99E-10	1.66E-09
264	Cadmium		4.52E-12	4.59E-12	1.10E-13	5.50E-01	2.49E-12	2.52E-12	2.48E-13	8.70E-12	2.74E-12	1.12E-11
265	Mercury		2.93E-11	2.97E-11	7.12E-13	2.30E-01	6.73E-12	6.83E-12	1.61E-12	5.62E-11	8.34E-12	6.31E-11
266							6.35E-01	r hay				
267							5.78E-07	k hay, 1/s				
268							2.72E+06	t hay, s				
269							3.50E-01	Y hay, Kg/M2				
270							2.49E+06	SDF hay, sec*mg/Kg				
271							3.15E+07	sec/yr				
272							1.00E+03	mg/g				
273												
274												
275												
276												
277												
278												
279												
280												
281												

$$SDF = \frac{-kt}{r*(1-e^{-kt})}$$

$$Cs = SDF*Deposition*mgg/secyr$$

$$Cu = RUF*Csoil$$

$$C\ hay = Cs+Cu$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

B	C	U	V	W	X	Y	Z	AA	AB	AC	AD
BASE CASE	18-Jun-91 14:11:47	C soil AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	C soil MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	D DEPOSITION RATE g/M2/YR	PUF PLANT UPTAKE FACTOR	Cu AVERAGE CONC.DUE TO UPTAKE mg/Kg	Cu MAXIMUM CONC.DUE TO UPTAKE mg/Kg	Cs AVERAGE CONC. ON PLANT SURFACE mg/Kg	Cs MAXIMUM CONC. ON PLANT SURFACE mg/Kg	C corn AVERAGE CALCULATED CONC IN CORN SILAGE mg/Kg	C corn MAXIMUM CALCULATED CONC IN CORN SILAGE mg/Kg
202		2.37E-09	2.40E-09	5.76E-11	6.13E+01	1.45E-07	1.47E-07	2.21E-11	7.72E-10	1.45E-07	1.48E-07
203	Acetonitrile	3.67E-15	3.73E-15	8.94E-17	1.99E-03	7.29E-18	7.40E-18	3.42E-17	1.20E-15	4.15E-17	1.21E-15
204	Aldrin	1.33E-10	1.35E-10	3.24E-12	1.17E+01	1.56E-09	1.58E-09	1.24E-12	4.34E-11	1.56E-09	1.62E-09
205	Aniline	8.22E-13	8.34E-13	2.00E-14	1.09E+00	8.92E-13	9.05E-13	7.66E-15	2.68E-11	9.00E-13	1.17E-12
206	Atrazine	6.06E-11	6.15E-11	1.47E-12	5.39E+00	3.27E-10	3.31E-10	5.65E-13	1.98E-11	3.27E-10	3.51E-10
207	Benzaldehyde	2.95E-10	2.99E-10	7.17E-12	1.10E+00	3.24E-10	3.29E-10	2.75E-12	9.61E-11	3.27E-10	4.25E-10
208	Benzo(a)pyrene	2.97E-11	3.01E-11	7.22E-13	3.20E+00	9.50E-11	9.64E-11	2.77E-13	9.68E-12	9.53E-11	1.06E-10
209	Benzoic Acid	6.47E-10	6.57E-10	1.58E-11	4.84E+00	3.14E-09	3.18E-09	6.03E-12	2.11E-10	3.14E-09	3.39E-09
210	Benzonitrile	2.76E-13	2.80E-13	6.72E-15	2.66E+00	7.33E-13	7.44E-13	2.57E-15	9.00E-14	7.35E-13	8.34E-13
211	Bis(2-ethylhexyl)phthalate	1.63E-13	1.65E-13	3.96E-15	3.36E-04	5.48E-17	5.56E-17	1.52E-15	5.31E-14	1.57E-15	5.32E-14
212	Carbazole	1.33E-12	1.35E-12	3.24E-14	4.81E-01	6.39E-13	6.49E-13	1.24E-14	4.34E-13	6.52E-13	1.08E-12
213	4-Chloroaniline	7.62E-14	7.73E-14	1.85E-15	3.38E+00	2.57E-13	2.61E-13	7.10E-14	2.48E-14	2.58E-13	2.86E-13
214	4-Chlorobiphenyl	1.88E-13	1.90E-13	4.57E-15	5.60E-02	1.05E-14	1.07E-14	1.75E-15	6.12E-14	1.22E-14	7.19E-14
215	4,4'-Dichlorobiphenyl	9.44E-15	9.58E-15	2.30E-16	2.26E-02	2.13E-16	2.16E-16	8.80E-17	3.08E-15	3.01E-16	3.30E-15
216	Chloroethane	6.72E-12	6.82E-12	1.64E-13	5.32E+00	3.58E-11	3.63E-11	6.27E-14	2.19E-12	3.58E-11	3.85E-11
217	Dibenzofuran	5.91E-12	6.00E-12	1.44E-13	1.59E-01	9.38E-13	9.52E-13	5.51E-14	1.93E-12	9.93E-13	2.88E-12
218	1,2-Dichloroethane	6.81E-13	6.91E-13	1.66E-14	5.39E+00	3.67E-12	3.72E-12	6.34E-15	2.22E-13	3.67E-12	3.94E-12
219	Dieldrin	6.74E-15	6.84E-15	1.64E-16	9.84E-03	6.65E-17	6.75E-17	6.29E-17	2.20E-15	1.29E-16	2.27E-15
220	Hexachlorobenzene	1.78E-11	1.81E-11	4.34E-13	2.61E-02	4.66E-13	4.73E-13	1.66E-13	5.82E-12	6.32E-13	6.29E-12
221	Hydrazine	2.30E-08	2.34E-08	5.61E-10	2.38E+03	5.48E-05	5.56E-05	2.15E-10	7.51E-09	5.48E-05	5.56E-05
222	Lindane	3.13E-15	3.18E-15	7.63E-17	4.74E-01	1.49E-15	1.51E-15	2.92E-17	1.02E-15	1.52E-15	2.53E-15
223	Malathion	9.26E-15	9.39E-15	2.25E-16	8.20E-01	7.59E-15	7.70E-15	8.63E-17	3.02E-15	7.67E-15	1.07E-14
224	Methyl ethyl ketone	1.14E-12	1.16E-12	2.78E-14	2.75E+01	3.14E-11	3.19E-11	1.07E-14	3.73E-13	3.14E-11	3.23E-11
225	4-Methylphenol	1.04E-12	1.05E-12	2.53E-14	2.92E+00	3.03E-12	3.07E-12	9.67E-15	3.38E-13	3.04E-12	3.41E-12
226	Monomethyl hydrazine	7.26E-09	7.37E-09	1.77E-10	2.38E+03	1.73E-05	1.75E-05	6.77E-11	2.37E-09	1.73E-05	1.75E-05
227	Naphthalene	1.22E-13	1.24E-13	2.98E-15	4.44E-01	5.43E-14	5.51E-14	1.14E-15	3.99E-14	5.54E-14	9.50E-14
228	Naphthalene carbonitrile	6.47E-10	6.57E-10	1.58E-11	4.44E-01	2.87E-10	2.91E-10	6.03E-12	2.11E-10	2.93E-10	5.03E-10
229	n-Nitrosodimethylamine	7.39E-12	7.49E-12	1.80E-13	9.65E+01	7.13E-10	7.23E-10	6.89E-14	2.41E-12	7.13E-10	7.25E-10
230	PAHs										
231	Acenaphthalene	2.95E-11	2.99E-11	7.17E-13	1.70E-01	5.00E-12	5.07E-12	2.75E-13	9.61E-12	5.27E-12	1.47E-11
232	Acenaphthene	2.95E-11	2.99E-11	7.17E-13	2.07E-01	6.11E-12	6.19E-12	2.75E-13	9.61E-12	6.38E-12	1.58E-11
233	Benzo(a)pyrene	5.91E-11	6.00E-11	1.44E-12	7.35E-02	4.33E-13	4.41E-13	5.51E-13	1.93E-11	9.86E-13	1.97E-11
234	Chrysene	5.91E-12	6.00E-12	1.44E-13	1.71E-02	1.01E-13	1.02E-13	5.51E-14	1.93E-12	1.56E-13	2.03E-12
235	Dibenzo(a,h)anthracene	5.91E-11	6.00E-11	1.44E-12	6.61E-03	3.91E-13	3.96E-13	5.51E-13	1.93E-11	9.42E-13	1.97E-11
236	Fluorene	5.91E-11	6.00E-11	1.44E-12	3.65E-02	2.19E-12	2.19E-12	5.51E-13	1.93E-11	2.71E-12	2.15E-11
237	Phenanthrene	5.91E-12	6.00E-12	1.44E-13	1.12E-01	6.63E-13	6.73E-13	5.51E-14	1.93E-12	7.18E-13	2.60E-12
238	Pyrene	2.30E-14	2.34E-14	5.61E-16	8.70E-02	2.00E-15	2.03E-15	2.15E-16	7.51E-15	2.22E-15	9.55E-15
239	Parathion	1.18E-10	1.20E-10	2.88E-12	3.85E-02	4.55E-12	4.62E-12	1.10E-12	3.86E-11	5.66E-12	4.32E-11
240	Permethrin	1.47E-14	1.49E-14	3.57E-16	2.40E-01	3.52E-15	3.57E-15	1.37E-16	4.78E-15	3.65E-15	8.35E-15
241	Pentachlorobenzene	7.26E-12	7.37E-12	1.77E-13	4.40E-02	3.20E-13	3.24E-13	6.77E-14	2.37E-12	3.87E-13	2.69E-12
242	Phenol	1.16E-13	1.18E-13	2.83E-15	5.54E+00	6.43E-13	6.53E-13	1.08E-15	3.79E-14	6.44E-13	6.91E-13
243	Quinoline	6.66E-12	6.76E-12	1.62E-13	2.59E+00	1.72E-11	1.75E-11	6.21E-14	2.17E-12	1.73E-11	1.96E-11
244	Tetrachlorobenzene	3.57E-12	3.62E-12	8.69E-14	1.14E-01	4.05E-13	4.11E-13	3.33E-14	1.16E-12	4.39E-13	1.58E-12
245	Trichlorobenzene	1.81E-12	1.83E-12	4.40E-14	1.91E-01	3.46E-13	3.51E-13	1.68E-14	5.90E-13	3.62E-13	9.40E-13
246	Unsym. dimethyl hydrazine	2.86E-08	2.91E-08	6.97E-10	9.85E+02	2.82E-05	2.86E-05	2.67E-10	9.34E-09	2.82E-05	2.86E-05
247	Vapona	5.79E-14	5.87E-14	1.41E-15	6.00E+00	3.47E-13	3.52E-13	5.40E-16	1.89E-14	3.48E-13	3.71E-13

202	B	C	U	V	W	X	Y	Z	AA	AB	AC	AD
203	BASE CASE											
262	INORGANICS		TABLE 19									
263	Arsenic		7.80E-10	7.92E-10	1.90E-11	2.30E-01	1.79E-10	1.82E-10	7.27E-12	2.55E-10	1.87E-10	4.37E-10
264	Cadmium		4.52E-12	4.59E-12	1.10E-13	1.50E-01	6.79E-13	6.88E-13	4.22E-14	1.48E-12	7.21E-13	2.16E-12
265	Mercury		2.93E-11	2.97E-11	7.12E-13	2.20E-02	6.44E-13	6.53E-13	2.73E-13	9.55E-12	9.16E-13	1.02E-11
266												
267					4.40E-01 r corn							
268					5.78E-07 k corn, 1/s							
269					1.12E+07 t corn, s							
270					1.80E+00 Y corn, Kg/M2							
271					4.22E+05 SDF corn, sec/mg/Kg							
272					3.15E+07 sec/yr							
273					1.00E+03 mg/g							
274												
275												
276												
277												
278												
279												
280												

$SDF = r * (1 - e^{-kt})$
 $Cs = SDF * Deposition * mgg / secyr$
 $Cu = RUF * Csoil$
 $C \text{ corn} = Cs + Cu$

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

202	B	C	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
203	BASE CASE		TABLE 20									
262	INORGANICS											
263	Arsenic		1.61E-09	1.63E-09	5.53E-11	1.30E-02	2.09E-11	2.12E-11	1.99E-10	6.97E-09	2.20E-10	6.99E-09
264	Cadmium		9.32E-12	9.45E-12	3.20E-13	5.50E-01	5.13E-12	5.20E-12	1.15E-12	4.04E-11	6.28E-12	4.56E-11
265	Mercury		6.03E-11	6.11E-11	2.07E-12	5.90E-01	3.56E-11	3.61E-11	7.47E-12	2.61E-10	4.30E-11	2.98E-10
266												
267						6.71E-02	r grass					
268						5.78E-07	k grass, 1/s					
269						3.02E+06	t grass, s					
270						2.41E-02	Y grass, Kg/M2					
271						3.97E+06	SDF grass, sec*mg/kg					
272						3.15E+07	sec/yr					
273						1.00E+03	mg/g					
274												
275												
276												
277												
278												
279												
280												
281												

$$SDF = \frac{-kt}{Y * k} * (1 - e^{-Y * k})$$

Cs = SDF*Deposition*mgg/secyr
 Cu = RUF*Csoil
 C grass = Cs+Cu

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

202 B	BASE CASE	C	TABLE 21 MILK INGESTION - AVERAGE	AR	AS	AT	AU	AV	AW
203									
204									
205									
206									
207									
208									
209									
210									
211									
212									
213									
214									
215	ORGANICS								
216	Acetonitrile	1.30E-07			3.72E-09	1.09E-14		2.37E-18	1.37E-17
217	Aldrin	4.79E-17			2.04E-01	2.19E-16		4.78E-20	2.76E-19
218	Aniline	1.40E-09			6.46E-08	2.03E-15		4.43E-19	2.56E-18
219	Atrazine	8.12E-13			3.89E-06	7.09E-17		1.54E-20	8.92E-20
220	Benzaldehyde	2.95E-10			2.45E-07	1.62E-15		3.54E-19	2.04E-18
221	Benzo(a)pyrene	2.95E-10			3.80E-06	2.52E-14		5.49E-18	3.17E-17
222	Benzoic Acid	8.58E-11			6.03E-07	1.16E-15		2.53E-19	1.46E-18
223	Benzo(b)fluoranthene	2.83E-09			2.95E-07	1.87E-14		4.08E-18	2.36E-17
224	Benzo(k)fluoranthene	6.63E-13			8.32E-07	1.24E-17		2.70E-21	1.56E-20
225	Bis(2-ethylhexyl)phthalate	1.88E-15			4.37E+00	1.84E-13		4.02E-17	2.32E-16
226	Carbazole	5.90E-13			1.58E-05	2.10E-16		4.58E-20	2.64E-19
227	4-Chloroaniline	2.32E-13			5.50E-07	2.87E-18		6.24E-22	3.61E-21
228	4-Chlorobiphenyl	1.16E-14			6.46E-04	1.68E-16		3.65E-20	2.11E-19
229	4,4'-Dichlorobiphenyl	2.98E-16			3.09E-03	2.07E-17		4.50E-21	2.60E-20
230	Chloroethane	3.23E-11			2.51E-07	1.82E-16		3.96E-20	2.29E-19
231	Dibenzofuran	9.11E-13			1.07E-04	2.19E-15		4.77E-19	2.76E-18
232	1,2-Dichloroethane	3.31E-12			2.45E-07	1.82E-17		3.97E-21	2.29E-20
233	Dieldrin	1.36E-16			1.29E-02	3.92E-17		8.55E-21	4.94E-20
234	Hexachlorobenzene	6.20E-13			2.40E-03	3.34E-14		7.27E-18	4.20E-17
235	Hydrazine	4.93E-05			6.76E-12	7.48E-15		1.63E-18	9.42E-18
236	Lindane	1.37E-15			1.62E-05	5.00E-19		1.09E-22	6.29E-22
237	Malathion	6.93E-15			6.31E-06	9.82E-19		2.14E-22	1.24E-21
238	Methyl ethyl ketone	2.83E-11			1.48E-08	9.40E-18		2.05E-21	1.18E-20
239	4-Methylphenol	2.73E-12			7.08E-07	4.35E-17		9.47E-21	5.47E-20
240	Monomethyl hydrazine	1.55E-05			6.76E-12	2.36E-15		5.14E-19	2.97E-18
241	Naphthalene	5.03E-14			1.82E-05	2.05E-17		4.47E-21	2.58E-20
242	Naphthalene carbonitrile	2.66E-10			1.82E-05	1.09E-13		2.37E-17	1.37E-16
243	n-Nitrosodimethylamine	6.41E-10			1.70E-09	2.45E-17		5.33E-21	3.08E-20
244	PAHs								
245	Acenaphthalene	4.83E-12			9.55E-05	1.04E-14		2.26E-18	1.30E-17
246	Acenaphthene	5.83E-12			6.76E-05	8.84E-15		1.93E-18	1.11E-17
247	Benzo(a)pyrene	1.06E-12			2.14E-02	5.07E-13		1.10E-16	6.38E-16
248	Chrysene	1.57E-13			5.01E-03	1.77E-14		3.85E-18	2.23E-17
249	Dibenz(a,h)anthracene	1.02E-12			2.57E-02	5.87E-13		1.28E-16	7.38E-16
250	Fluoranthene	2.61E-12			1.35E-03	7.90E-14		1.72E-17	9.94E-17
251	Fluorene	6.63E-13			1.95E-04	2.90E-15		6.32E-19	3.65E-18
252	Phenanthrene	2.06E-15			3.02E-04	1.40E-17		3.05E-21	1.76E-20
253	Pyrene	5.43E-12			1.23E-03	1.50E-13		3.27E-17	1.89E-16
254	Parathion	3.33E-15			5.25E-05	3.92E-18		8.54E-22	4.93E-21
255	Pentachlorobenzene	3.69E-13			9.77E-04	8.10E-15		1.77E-18	1.02E-17
256	Phenol	5.80E-13			2.34E-07	3.05E-18		6.65E-22	3.84E-21
257	Quinoline	1.56E-11			8.71E-07	3.05E-16		6.63E-20	3.83E-19
258	Tetrachlorobenzene	4.09E-13			1.91E-04	1.73E-15		3.77E-19	2.18E-18
259	Trichlorobenzene	3.31E-13			7.76E-05	5.78E-16		1.26E-19	7.27E-19
260	Unsym. dimethyl hydrazine	2.54E-05			3.09E-11	1.76E-14		3.84E-18	2.22E-17
261	Vapona	3.13E-13			2.04E-07	1.44E-18		3.13E-22	1.81E-21

202	B	C	AQ	AR	AS	AT	AU	AV	AW
203	BASE CASE	TABLE 21							
262	INORGANICS								
263	Arsenic	6.89E-11			6.00E-03	9.28E-12		2.02E-15	1.17E-14
264	Cadmium	8.54E-13			1.00E-03	1.92E-14		4.18E-18	2.41E-17
265	Mercury	4.84E-12			4.50E-04	4.89E-14		1.06E-17	6.15E-17
266									
267	ADULT		CHILD						
268	0.55		DAILY INTAKE OF GRAIN % of TOTAL						DI grain
269	0.175		DAILY INTAKE OF HAY % of TOTAL						DI hay
270	0		DAILY INTAKE OF GRASS % of TOTAL						DI grass
271	0.175		DAILY INTAKE OF CORN SILAGE % of TOTAL						DI corn
272	0.02		SOIL INGESTION % of GRASS INTAKE						SI
273	22.45		TOTAL FEED INTAKE Kg/day						TI
274	0.305		0.39 CONSUMPTION RATE OF MILK PER DAY Kg/day						CRm
275	0.011		0.016 CONSUMPTION RATE OF MILK FAT PER DAY Kg/day						CRmf
276	0.05		0.05 FRACTION OF MILK CONSUMED FROM RURAL SOURCE.						HG
277	70		15.5 BODY WEIGHT Kg						WT

$$C \text{ diet} = (\text{SUM}(C \text{ feedx*DIx}) + (C \text{ soil*SI*DI GRASS})) / (1 + (SI*DI GRASS))$$

279

AY
TABLE 22
MILK INGESTION - MAXIMUM
AZ

B	C	BASE CASE	AZ	BA	BB	BC	BD	BE
202			TABLE 22					
203			MILK INGESTION - MAXIMUM					
204								
205								
206								
207								
208								
209								
210								
211								
212								
213								
214	ORGANICS							
215	Acetonitrile		1.33E-07	3.72E-09	1.11E-14	1.11E-14	2.42E-18	1.40E-17
216	Aldrin		1.45E-15	2.04E-01	6.66E-15	6.66E-15	1.45E-18	8.37E-18
217	Aniline		1.47E-09	6.46E-08	2.13E-15	2.13E-15	4.65E-19	2.69E-18
218	Atrazine		1.14E-12	3.89E-06	9.94E-17	9.94E-17	2.16E-20	1.25E-19
219	Benzaldehyde		3.22E-10	2.45E-07	1.77E-15	1.77E-15	3.87E-19	2.23E-18
220	Benzofuran		4.12E-10	3.80E-06	3.52E-14	3.52E-14	7.66E-18	4.42E-17
221	Benzoic Acid		9.84E-11	6.03E-07	1.33E-15	1.33E-15	2.90E-19	1.67E-18
222	Benzonitrile		3.12E-09	2.95E-07	2.07E-14	2.07E-14	4.50E-18	2.60E-17
223	Benzothiazole		7.78E-13	8.32E-07	1.45E-17	1.45E-17	3.16E-21	1.83E-20
224	Bis(2-ethylhexyl)phthalate		6.41E-14	4.37E+00	6.29E-12	6.29E-12	1.37E-15	7.91E-15
225	Carbazole		1.11E-12	1.58E-05	3.94E-16	3.94E-16	8.58E-20	4.96E-19
226	4-Chloroaniline		2.65E-13	5.50E-07	3.27E-18	3.27E-18	7.12E-22	4.11E-21
227	4-Chlorobiphenyl		8.34E-14	6.46E-04	1.21E-15	1.21E-15	2.63E-19	1.52E-18
228	4,4'-Chlorobiphenyl		3.91E-15	3.09E-03	2.71E-16	2.71E-16	5.91E-20	3.41E-19
229	Chloroethane		3.53E-11	2.51E-07	1.99E-16	1.99E-16	4.34E-20	2.50E-19
230	Dibenzofuran		3.18E-12	1.07E-04	7.66E-15	7.66E-15	1.67E-18	9.63E-18
231	1,2-Dichloroethane		3.62E-12	2.45E-07	1.99E-17	1.99E-17	4.34E-21	2.51E-20
232	Dieldrin		2.71E-15	1.29E-02	7.85E-16	7.85E-16	1.71E-19	9.88E-19
233	Hexachlorobenzene		7.44E-12	2.40E-03	4.01E-13	4.01E-13	8.73E-17	5.04E-16
234	Hydrazine		5.00E-05	6.76E-12	7.59E-15	7.59E-15	1.65E-18	9.55E-18
235	Lindane		2.59E-15	1.62E-05	9.43E-19	9.43E-19	2.05E-22	1.19E-21
236	Malathion		1.06E-14	6.31E-06	1.50E-18	1.50E-18	3.26E-22	1.88E-21
237	Methyl ethyl ketone		2.91E-11	1.48E-08	9.68E-18	9.68E-18	2.11E-21	1.22E-20
238	4-Methylphenol		3.17E-12	7.08E-07	5.04E-17	5.04E-17	1.10E-20	6.34E-20
239	Monomethyl hydrazine		1.58E-05	6.76E-12	2.39E-15	2.39E-15	5.22E-19	3.01E-18
240	Naphthalene		9.78E-14	1.82E-05	3.99E-17	3.99E-17	8.70E-21	5.02E-20
241	Naphthalene carbonitrile		5.17E-10	1.82E-05	2.11E-13	2.11E-13	4.60E-17	2.66E-16
242	n-Nitrosodimethylamine		6.54E-10	1.70E-09	2.49E-17	2.49E-17	5.43E-21	3.13E-20
243	PAHs							
244	Acenaphthalene		1.62E-11	9.55E-05	3.46E-14	3.46E-14	7.55E-18	4.36E-17
245	Acenaphthene		1.72E-11	6.76E-05	2.61E-14	2.61E-14	5.68E-18	3.28E-17
246	Benzo(a)pyrene		2.37E-11	2.14E-02	1.14E-11	1.14E-11	2.47E-15	1.43E-14
247	Chrysene		2.42E-12	5.01E-03	2.72E-13	2.72E-13	5.93E-17	3.42E-16
248	Dibenzo(a,h)anthracene		2.36E-11	2.57E-02	1.36E-11	1.36E-11	2.97E-15	1.72E-14
249	Fluoranthene		2.52E-11	1.35E-03	7.64E-13	7.64E-13	1.67E-16	9.62E-16
250	Fluorene		2.93E-12	1.95E-04	1.28E-14	1.28E-14	2.80E-18	1.61E-17
251	Phenanthrene		1.09E-14	3.02E-04	7.38E-17	7.38E-17	1.61E-20	9.29E-20
252	Pyrene		5.07E-11	1.23E-03	1.40E-12	1.40E-12	3.05E-16	1.76E-15
253	Parathion		8.97E-15	5.25E-05	1.06E-17	1.06E-17	2.30E-21	1.33E-20
254	Pentachlorobenzene		3.15E-12	9.77E-04	6.91E-14	6.91E-14	1.51E-17	8.69E-17
255	Phenol		6.35E-13	2.34E-07	3.33E-18	3.33E-18	7.26E-22	4.19E-21
256	Quinoline		1.83E-11	8.71E-07	3.59E-16	3.59E-16	7.82E-20	4.51E-19
257	Tetrachlorobenzene		1.77E-12	1.91E-04	7.59E-15	7.59E-15	1.65E-18	9.55E-18
258	Trichlorobenzene		1.03E-12	7.76E-05	1.79E-15	1.79E-15	3.90E-19	2.25E-18
259	Unsym. dimethyl hydrazine		2.58E-05	3.09E-11	1.79E-14	1.79E-14	3.90E-18	2.25E-17
260	Vapona		3.40E-13	2.04E-07	1.56E-18	1.56E-18	3.39E-22	1.96E-21
261								

202	B	C	AY	AZ	BA	BB	BC	BD	BE
203	BASE CASE		TABLE 22						
262	INORGANICS								
263	Arsenic		3.68E-10		6.00E-03	4.96E-11		1.08E-14	6.24E-14
264	Cadmium		2.59E-12		1.00E-03	5.82E-14		1.27E-17	7.33E-17
265	Mercury		1.61E-11		4.50E-04	1.63E-13		3.54E-17	2.04E-16
266									
267		CHILD	ADULT						
268			0.55			DAILY INTAKE OF GRAIN	% of TOTAL		DI grain
269			0.175			DAILY INTAKE OF HAY	% of TOTAL		DI hay
270			0			DAILY INTAKE OF GRASS	% of TOTAL		DI grass
271			0.175			DAILY INTAKE OF CORN SILAGE	% of TOTAL		DI corn
272			0.02			SOIL INGESTION % of GRASS	INTAKE		SI
273			22.45			TOTAL FEED INTAKE	Kg/day		TI
274			0.305			0.39 CONSUMPTION RATE OF MILK PER DAY	Kg/day		CRm
275			0.011			0.016 CONSUMPTION RATE OF MILK FAT PER DAY	Kg/day		CRmf
276						0.05 FRACTION OF MILK CONSUMED FROM RURAL SOURCE.			HG
277			70			15.5 ADULT WEIGHT	Kg		WT
278									
279									
280									

C diet = (SUM(C feedx*DIx)+(C soil*SI*DI GRASS))/(1+(SI*DI GRASS))

C milkfat = DUFm*C diet (dioxins)

C diet = (SUM(C feedx*DIx)+(C soil*SI*DI GRASS))/(1+(SI*DI GRASS))

C milkfat = DUFm*C diet (dioxins)

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

202	B	C	BG	BH	BI	BJ	BK	BL	BM
203	BASE CASE	TABLE 23	BEFF INGESTION - AVERAGE						
204									
205									
206									
207		18-Jun-91							
208		14:11:47							
209			C diet	DUFb	TC	C beef	C beeffat	EDI	EDI
210			AVERAGE	DIET	TRANSFER	AVERAGE	AVERAGE	ADULT	CHILD
211			CONC IN	UPTAKE	COEFFICIENT	CALCULATED	CALCULATED	AVERAGE	AVERAGE
212			DIET	BEFF	BEFF	CONC IN	CONC IN	ESTIMATED	ESTIMATED
213			(beef)	Unitless	Day/Kg	BEFF	BEFFAT	DAILY	DAILY
214	ORGANICS		mg/Kg			mg/Kg	mg/Kg	INTAKE	INTAKE
215	Acetonitrile	1.30E-07			1.15E-08	1.94E-14		9.30E-19	2.32E-18
216	Aldrin	1.84E-17			6.31E-01	1.50E-16		7.19E-21	1.79E-20
217	Aniline	1.40E-09			2.00E-07	3.62E-15		1.73E-19	4.33E-19
218	Atrazine	8.05E-13			1.20E-05	1.26E-16		6.01E-21	1.50E-20
219	Benzaldehyde	2.94E-10			7.59E-07	2.89E-15		1.38E-19	3.45E-19
220	Benzo(a)pyrene	2.93E-10			1.17E-05	4.46E-14		2.13E-18	5.32E-18
221	Benzoic Acid	8.56E-11			1.86E-06	2.07E-15		9.89E-20	2.47E-19
222	Benzonitrile	2.82E-09			9.12E-07	3.34E-14		1.60E-18	3.99E-18
223	Benzothiazole	6.61E-13			2.57E-06	2.20E-17		1.05E-21	2.63E-21
224	Bis(2-ethylhexyl)phthalate	5.73E-16			1.35E+01	1.00E-13		4.79E-17	1.20E-17
225	Carbazole	5.80E-13			4.90E-05	3.68E-16		1.76E-20	4.39E-20
226	4-Chloroaniline	2.32E-13			1.70E-06	5.10E-18		2.44E-22	6.09E-22
227	4-Chlorobiphenyl	1.01E-14			2.00E-03	2.60E-16		1.24E-20	3.10E-20
228	4,4'-Chlorobiphenyl	2.22E-16			9.55E-03	2.75E-17		1.32E-21	3.28E-21
229	Chloroethane	3.22E-11			7.76E-07	3.24E-16		1.55E-20	3.87E-20
230	Dibenzofuran	8.63E-13			3.31E-04	3.71E-15		1.77E-19	4.43E-19
231	1,2-Dichloroethane	3.30E-12			7.59E-07	3.25E-17		1.56E-21	3.88E-21
232	Dieldrin	8.15E-17			3.98E-02	4.21E-17		2.01E-21	5.02E-21
233	Hexachlorobenzene	7.77E-13			7.41E-03	4.58E-14		2.19E-18	5.47E-18
234	Hydrazine	4.93E-05			2.09E-11	1.34E-14		6.40E-19	1.59E-18
235	Lindane	1.35E-15			5.01E-05	8.76E-19		4.19E-23	1.05E-22
236	Malathion	6.86E-15			1.95E-05	1.73E-18		8.30E-23	2.07E-22
237	Methyl ethyl ketone	2.83E-11			4.57E-08	1.68E-17		8.03E-22	2.00E-21
238	4-Methylphenol	2.73E-12			2.19E-06	7.74E-17		3.70E-21	9.23E-21
239	Monomethyl hydrazine	1.55E-05			2.09E-11	4.21E-15		2.02E-19	5.03E-19
240	Naphthalene	4.93E-14			5.62E-05	3.59E-17		1.72E-21	4.29E-21
241	Naphthalene carbonitrile	2.61E-10			5.62E-05	1.90E-13		9.09E-18	2.27E-17
242	n-Nitrosodimethylamine	6.41E-10			5.25E-09	4.37E-17		2.09E-21	5.21E-21
243	PAHs								
244	Acenaphthalene	4.59E-12			2.95E-04	1.76E-14		8.41E-19	2.10E-18
245	Acenaphthene	5.59E-12			2.09E-04	1.51E-14		7.25E-19	1.81E-18
246	Benzo(a)pyrene	5.81E-13			6.61E-02	4.98E-13		2.38E-17	5.94E-17
247	Chrysene	1.10E-13			1.55E-02	2.20E-14		1.06E-18	2.63E-18
248	Dibenzo(a,h)anthracene	5.42E-13			7.94E-02	5.58E-13		2.67E-17	6.66E-17
249	Fluoranthene	2.13E-12			4.17E-03	1.15E-13		5.52E-18	1.38E-17
250	Fluorene	6.16E-13			6.03E-04	4.81E-15		2.30E-19	5.74E-19
251	Phenanthrene	1.88E-15			9.33E-04	2.27E-17		1.09E-21	2.71E-21
252	Pyrene	4.48E-12			3.80E-03	2.21E-13		1.06E-17	2.64E-17
253	Parathion	3.21E-15			1.62E-04	6.75E-18		3.23E-22	8.06E-22
254	Pentachlorobenzene	3.11E-13			3.02E-03	1.22E-14		5.83E-19	1.45E-18
255	Phenol	5.79E-13			7.24E-07	5.44E-18		2.60E-22	6.50E-22
256	Quinoline	1.55E-11			2.69E-06	5.42E-16		2.59E-20	6.47E-20
257	Tetrachlorobenzene	3.70E-13			5.89E-04	2.87E-15		1.38E-19	3.43E-19
258	Trichlorobenzene	3.17E-13			2.40E-04	9.86E-16		4.72E-20	1.18E-19
259	Unsym. dimethyl hydrazine	2.54E-05			9.55E-11	3.15E-14		1.51E-18	3.75E-18
260	Vapona	3.13E-13			6.31E-07	2.56E-18		1.22E-22	3.05E-22
261									

202	B	C	BG	BH	BI	BJ	BK	BL	BM
203	BASE CASE		TABLE 23						
262	INORGANICS								
263	Arsenic		2.13E-11		2.00E-03	5.54E-13		2.65E-17	6.61E-17
264	Cadmium		5.39E-13		5.50E-04	3.81E-15		1.83E-19	4.55E-19
265	Mercury		5.14E-12		2.50E-01	1.67E-11		7.98E-16	1.99E-15
266									
267	ADULT			CHILD					
268	0.8			DAILY INTAKE OF GRAIN	% of TOTAL				DI grain
269	0.05			DAILY INTAKE OF HAY	% of TOTAL				DI hay
270	0			DAILY INTAKE OF GRASS	% of TOTAL				DI grass
271	0.05			DAILY INTAKE OF CORN SILAGE	% of TOTAL				DI corn
272	0.02			SOIL INGESTION	% of GRASS INTAKE				SI
273	12.97			TOTAL FEED INTAKE	Kg/day				TI
274	0.067			0.037	CONSUMPTION RATE OF BEEF	PER DAY	Kg/day		CRb
275	0.015			0.009	CONSUMPTION RATE OF BEEF	FAT PER DAY	Kg/day		CRbf
276	0.05			0.05	FRACTION OF BEEF	CONSUMED FROM RURAL	SOURCE.		HG
277	70			15.5	BODY WEIGHT	Kg			WT
278									
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feed} * DI * X) + (C \text{ soil} * SI * DI \text{ GRASS})) / ((1 + (SI * DI \text{ GRASS})))$$

202	B	C	BO	BP	BQ	BR	BS	BT	BU
203	BASE CASE	TABLE 24	BO	BP	BQ	BR	BS	BT	BU
204		BEF INGESTION - MAXIMUM							
205									
206									
207		18-Jun-91	C diet	DUFb	TC	C beef	C beeffat	EDI	EDI
208		14:11:47	MAXIMUM	DIET	TRANSFER	MAXIMUM	MAXIMUM	ADULT	CHILD
209			CALCULATED	UPTAKE	COEFFICIENT	CALCULATED	CALCULATED	MAXIMUM	MAXIMUM
210			CONC IN	BEF	BEF	CONC IN	CONC IN	ESTIMATED	ESTIMATED
211			DIET	Unitless	Day/Kg	BEF	BEFFAT	DAILY	DAILY
212			(beef)			mg/Kg	mg/Kg	INTAKE	INTAKE
213			mg/Kg					mg/Kg/day	mg/Kg/day
214	ORGANICS								
215	Acetonitrile		1.33E-07		1.15E-08	1.97E-14		9.45E-19	2.36E-18
216	Aldrin		4.20E-16		6.31E-01	3.43E-15		1.64E-19	4.10E-19
217	Aniline		1.44E-09		2.00E-07	3.71E-15		1.78E-19	4.43E-19
218	Atrazine		9.07E-13		1.20E-05	1.41E-16		6.77E-21	1.69E-20
219	Benzaldehyde		3.05E-10		7.59E-07	3.00E-15		1.44E-19	3.58E-19
220	Benzofuran		3.29E-10		1.17E-05	5.01E-14		2.40E-18	5.98E-18
221	Benzoic Acid		9.01E-11		1.86E-06	2.18E-15		1.04E-19	2.60E-19
222	Benzonitrile		2.94E-09		9.12E-07	3.47E-14		1.66E-18	4.15E-18
223	Benzothiazole		7.00E-13		2.57E-06	2.33E-17		1.12E-21	2.79E-21
224	Bis(2-ethylhexyl)phthalate		1.84E-14		1.35E-01	3.21E-12		1.54E-16	3.83E-16
225	Carbazole		7.33E-13		4.90E-05	4.66E-16		2.23E-20	5.56E-20
226	4-Chloroaniline		2.43E-13		1.70E-06	5.36E-18		2.57E-22	6.40E-22
227	4-Chlorobiphenyl		3.07E-14		2.00E-03	7.94E-16		3.80E-20	9.48E-20
228	4,4'-Chlorobiphenyl		1.26E-15		9.55E-03	1.56E-16		7.45E-21	1.86E-20
229	Chloroethane		3.34E-11		7.66E-07	3.36E-16		1.61E-20	4.01E-20
230	Dibenzofuran		1.52E-12		3.31E-04	6.53E-15		3.13E-19	7.80E-19
231	1,2-Dichloroethane		3.43E-12		7.59E-07	3.37E-17		1.61E-21	4.02E-21
232	Dieldrin		8.19E-16		3.98E-02	4.23E-16		2.02E-20	5.05E-20
233	Hexachlorobenzene		2.43E-12		7.41E-03	2.34E-13		1.12E-17	2.79E-17
234	Hydrazine		5.00E-05		2.09E-11	1.36E-14		6.49E-19	1.62E-18
235	Lindane		1.71E-15		5.01E-05	1.11E-18		5.32E-23	1.33E-22
236	Malathion		7.97E-15		1.95E-05	2.02E-18		9.64E-23	2.41E-22
237	Methyl ethyl ketone		2.88E-11		4.57E-08	1.71E-17		8.18E-22	2.04E-21
238	4-Methylphenol		2.88E-12		2.19E-06	8.17E-17		3.91E-21	9.75E-21
239	Monomethyl hydrazine		1.58E-05		2.09E-11	4.27E-15		2.05E-19	5.10E-19
240	Naphthalene		6.33E-14		5.62E-05	4.62E-17		2.21E-21	5.51E-21
241	Naphthalene carbonitrile		3.35E-10		5.62E-05	2.44E-13		1.17E-17	2.92E-17
242	n-Nitrosodimethylamine		6.51E-10		5.25E-09	4.43E-17		2.12E-21	5.29E-21
243	PAHs								
244	Acenaphthalene		7.88E-12		2.95E-04	3.01E-14		1.44E-18	3.60E-18
245	Acenaphthene		8.89E-12		2.09E-04	2.41E-14		1.15E-18	2.87E-18
246	Benzo(a)pyrene		7.05E-12		6.61E-02	6.04E-12		2.89E-16	7.21E-16
247	Chrysene		7.57E-13		1.55E-02	1.52E-13		7.28E-18	1.81E-17
248	Dibenzo(a,h)anthracene		7.01E-12		7.94E-02	7.22E-12		3.45E-16	8.61E-16
249	Fluoranthene		8.62E-12		4.17E-03	4.66E-13		2.23E-17	5.56E-17
250	Fluorene		1.27E-12		6.03E-04	9.93E-15		4.75E-19	1.18E-18
251	Phenanthrene		4.42E-15		9.33E-04	5.35E-17		2.56E-21	6.38E-21
252	Pyrene		1.75E-11		3.80E-03	8.61E-13		4.12E-17	1.03E-16
253	Parathion		4.86E-15		1.62E-04	1.02E-17		4.89E-22	1.22E-21
254	Pentachlorobenzene		1.11E-12		3.02E-03	4.34E-14		2.08E-18	5.18E-18
255	Phenol		6.00E-13		7.24E-07	5.64E-18		2.70E-22	6.73E-22
256	Quinoline		1.65E-11		2.69E-06	5.75E-16		2.75E-20	6.86E-20
257	Tetrachlorobenzene		7.71E-13		5.89E-04	5.89E-15		2.82E-19	7.03E-19
258	Trichlorobenzene		5.19E-13		2.40E-04	1.61E-15		7.72E-20	1.93E-19
259	Unsym. dimethyl hydrazine		2.58E-05		9.55E-11	3.19E-14		1.53E-18	3.81E-18
260	Vapona		3.24E-13		6.31E-07	2.65E-18		1.27E-22	3.16E-22
261									

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-JUN-91

202	B	C	BO	BP	BQ	BR	BS	BT	BU
203	BASE CASE		TABLE 24						
262	INORGANICS								
263	Arsenic		1.07E-10		2.00E-03	2.77E-12		1.33E-16	3.31E-16
264	Cadmium		1.04E-12		5.50E-04	7.39E-15		3.54E-19	8.82E-19
265	Mercury		8.41E-12		2.50E-01	2.73E-11		1.31E-15	3.26E-15
266									
267	ADULT	CHILD							
268	0.8								DI grain
269	0.05								DI hay
270	0								DI grass
271	0.05								DI corn
272	0.02								SI
273	12.97								TI
274	0.067								CRb
275	0.015								CRbf
276	0.05								HG
277	70								WT
278									
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feedx} * DIx) * (C \text{ soil} * SI * DI \text{ GRASS})) / ((1 + (SI * DI \text{ GRASS})))$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

B	C	E	F	G	H	I	J
BASE CASE	TABLE 25	DERMAL EXPOSURE CHILD	AF	ED1	ED1	ED1	
	C soil	C soil	CONC IN	ABSORPTION	AVERAGE	MAXIMUM	
	AVERAGE	MAXIMUM	CONC IN	FACTOR	ESTIMATED	ESTIMATED	
18-Jun-91	14:11:47	14:11:47	SOIL		DAILY	DAILY	
	CONC IN	CONC IN	SOIL		INTAKE	INTAKE	
	SOIL	SOIL	SOIL		mg/Kg/day	mg/Kg/day	
	.1M	.1M	.1M				
	mg/Kg	mg/Kg	mg/Kg				
284		4.87E-09	4.94E-09	1.00E-01	2.14E-14	2.17E-14	
285		7.57E-15	7.68E-15	1.00E-01	3.33E-20	3.37E-20	
286		2.74E-10	2.78E-10	1.00E-01	1.20E-15	1.22E-15	
287		1.69E-12	1.72E-12	1.00E-01	7.44E-18	7.55E-18	
288		1.25E-10	1.27E-10	1.00E-01	5.49E-16	5.57E-16	
289		6.07E-10	6.16E-10	1.00E-01	2.67E-15	2.71E-15	
290		6.11E-11	6.20E-11	1.00E-01	2.69E-16	2.73E-16	
291		1.33E-09	1.35E-09	1.00E-01	5.86E-15	5.95E-15	
292		5.69E-13	5.77E-13	1.00E-01	2.50E-18	2.53E-18	
293		3.36E-13	3.40E-13	1.00E-01	1.47E-18	1.50E-18	
294		2.74E-12	2.78E-12	1.00E-01	1.20E-17	1.22E-17	
295		1.57E-13	1.59E-13	1.00E-01	6.89E-19	6.99E-19	
296	ORGANICS	1.40E-12	1.42E-12	1.00E-01	1.70E-18	1.72E-18	
297	Acetonitrile	1.39E-14	1.37E-14	1.00E-01	8.53E-20	8.67E-20	
298	Aldrin	3.67E-11	3.73E-11	1.00E-01	6.09E-17	6.18E-17	
299	Aniline	4.75E-08	4.81E-08	1.00E-01	5.35E-17	5.43E-17	
300	Atrazine	6.46E-15	6.55E-15	1.00E-01	6.16E-18	6.25E-18	
301	Benzaldehyde	1.91E-14	1.93E-14	1.00E-01	6.11E-20	6.19E-20	
302	Benzofuran	2.36E-12	2.39E-12	1.00E-01	1.61E-16	1.64E-16	
303	Benzoic Acid	2.14E-12	2.17E-12	1.00E-01	2.09E-13	2.12E-13	
304	Benzonitrile	1.50E-08	1.52E-08	1.00E-01	2.84E-20	2.88E-20	
305	Benzothiazole	2.52E-13	2.56E-13	1.00E-01	8.38E-20	8.50E-20	
306	Bis(2-ethylhexyl)phthalate	1.33E-09	1.35E-09	1.00E-01	1.04E-17	1.05E-17	
307	Carbazole	1.52E-11	1.54E-11	1.00E-01	9.39E-18	9.53E-18	
308	4-Chloroaniline	6.07E-11	6.16E-11	1.00E-01	6.58E-14	6.67E-14	
309	4-Chlorobiphenyl	6.07E-11	6.16E-11	1.00E-01	1.11E-18	1.12E-18	
310	4,4'-Chlorobiphenyl	6.07E-11	6.16E-11	1.00E-01	5.86E-15	5.95E-15	
311	Chloroethane	6.07E-11	6.16E-11	1.00E-01	6.69E-17	6.78E-17	
312	Dibenzofuran	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
313	1,2-Dichloroethane	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
314	Dieldrin	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
315	Hexachlorobenzene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
316	Hydrazine	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
317	Lindane	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
318	Malathion	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
319	Methyl ethyl ketone	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
320	4-Methylphenol	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
321	Monomethyl hydrazine	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
322	Naphthalene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
323	Naphthalene carbonitrile	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
324	n-Nitrosodimethylamine	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
325	PAHs	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
326	Acenaphthalene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
327	Acenaphthene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
328	Benzo(a)pyrene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
329	Chrysene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
330	Dibenzo(a,h)anthracene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
331	Fluoranthene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
332	Fluorene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
333	Phenanthrene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
334	Pyrene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
335	Parathion	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
336	Pentachlorobenzene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
337	Phenol	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
338	Quinoline	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
339	Tetrachlorobenzene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
340	Trichlorobenzene	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
341	Unsym. dimethyl hydrazine	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
342	Vapona	6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	
343		6.07E-11	6.16E-11	1.00E-01	2.67E-16	2.71E-16	

284	B	C	E	F	G	H	I	J
285	BASE CASE		TABLE 25					
344	INORGANICS							
345	Arsenic		1.61E-09	1.63E-09	1.00E-02	7.06E-16	7.17E-16	
346	Cadmium		9.32E-12	9.45E-12	1.00E-02	4.10E-18	4.15E-18	
347	Mercury		6.03E-11	6.11E-11	1.00E-02	2.65E-17	2.69E-17	
348								
349			195	Number of exposure events per year (events/yr.)				NE
350			2500	Exposed surface area (cm2/event)				ESA
351			0.51	Skin adherence factor for soil (mg/cm2)				SAF
352			1	Soil matrix factor				SMF
353			15.5	Body weight (Kg)				BW
354			365	Days/yr				DAYR
355			1000000	mg/Kg				mgKg
356								
357								

$$EDI = C_{soil} * AF * SAF * ESA * NE * SMF / BW / mgKg / DAYR$$

284 285 286 287 288 289 290 291 292 293 294 295	B	C	BASE CASE	18-Jun-91 14:11:47	K		L	M	N		O
					TABLE 26				ED1		
					DERMAL EXPOSURE				AVERAGE ESTIMATED		
					C soil	ADULT C soil	AF				
					AVERAGE CALCULATED	MAXIMUM CALCULATED	ABSORPTION FACTOR				
					CONC IN SOIL	CONC IN SOIL					
					.2M	.2M					
					mg/Kg	mg/Kg					
296	ORGANICS										
297	Acetonitrile				2.44E-09	2.47E-09	1.00E-01		2.56E-15	2.60E-15	
298	Aldrin				3.78E-15	3.84E-15	1.00E-01		3.98E-21	4.03E-21	
299	Aniline				1.37E-10	1.39E-10	1.00E-01		1.44E-16	1.46E-16	
300	Atrazine				8.46E-13	8.59E-13	1.00E-01		8.90E-19	9.02E-19	
301	Benzaldehyde				6.24E-11	6.33E-11	1.00E-01		6.56E-17	6.65E-17	
302	Benzo(a)pyrene				3.04E-10	3.08E-10	1.00E-01		3.19E-16	3.24E-16	
303	Benzoic Acid				3.06E-11	3.10E-11	1.00E-01		3.21E-17	3.26E-17	
304	Benzonitrile				6.67E-10	6.77E-10	1.00E-01		7.01E-16	7.11E-16	
305	Benzothiazole				2.84E-13	2.88E-13	1.00E-01		2.99E-19	3.03E-19	
306	Bis(2-ethylhexyl)phthalate				1.68E-13	1.70E-13	1.00E-01		1.76E-19	1.79E-19	
307	Carbazole				1.37E-12	1.39E-12	1.00E-01		1.44E-18	1.46E-18	
308	4-Chloroaniline				7.84E-14	7.96E-14	1.00E-01		8.24E-20	8.36E-20	
309	4-Chlorobiphenyl				1.93E-13	1.96E-13	1.00E-01		2.03E-19	2.06E-19	
310	4,4'-Chlorobiphenyl				9.73E-15	9.87E-15	1.00E-01		1.02E-20	1.04E-20	
311	Chloroethane				6.93E-12	7.03E-12	1.00E-01		7.28E-18	7.38E-18	
312	Dibenzofuran				6.09E-12	6.18E-12	1.00E-01		6.40E-18	6.49E-18	
313	1,2-Dichloroethane				7.01E-13	7.11E-13	1.00E-01		7.37E-19	7.47E-19	
314	Dieldrin				6.93E-15	7.05E-15	1.00E-01		7.30E-21	7.41E-21	
315	Hexachlorobenzene				1.84E-11	1.86E-11	1.00E-01		1.93E-17	1.96E-17	
316	Hydrazine				2.37E-08	2.41E-08	1.00E-01		2.49E-14	2.53E-14	
317	Lindane				3.23E-15	3.27E-15	1.00E-01		3.39E-21	3.44E-21	
318	Malathion				9.53E-15	9.67E-15	1.00E-01		1.00E-20	1.02E-20	
319	Methyl ethyl ketone				1.19E-12	1.19E-12	1.00E-01		1.24E-18	1.26E-18	
320	4-Methylphenol				1.07E-12	1.08E-12	1.00E-01		1.12E-18	1.14E-18	
321	Monomethyl hydrazine				7.40E-09	7.59E-09	1.00E-01		7.86E-15	7.98E-15	
322	Naphthalene				1.26E-13	1.28E-13	1.00E-01		1.33E-19	1.34E-19	
323	Naphthalene carbonitrile				6.67E-10	6.77E-10	1.00E-01		7.01E-16	7.11E-16	
324	n-Nitrosodimethylamine				7.61E-12	7.72E-12	1.00E-01		8.00E-18	8.11E-18	
325	PAHS										
326	Acenaphthalene				3.04E-11	3.08E-11	1.00E-01		3.19E-17	3.24E-17	
327	Acenaphthene				3.04E-11	3.08E-11	1.00E-01		3.19E-17	3.24E-17	
328	Benzo(a)pyrene				6.09E-11	6.18E-11	1.00E-01		6.40E-17	6.49E-17	
329	Chrysene				6.09E-12	6.18E-12	1.00E-01		6.40E-18	6.49E-18	
330	Dibenzo(a,h)anthracene				6.09E-11	6.18E-11	1.00E-01		6.40E-17	6.49E-17	
331	Fluoranthene				6.09E-11	6.18E-11	1.00E-01	</			

284	B	C	K	L	M	N	O
285	BASE CASE						
344	INORGANICS						
345	Arsenic		8.04E-10	8.15E-10	1.00E-02	8.45E-17	8.57E-17
346	Cadmium		4.66E-12	4.73E-12	1.00E-02	4.90E-19	4.97E-19
347	Mercury		3.01E-11	3.06E-11	1.00E-02	3.17E-18	3.21E-18
348							
349			117 Number of exposure events per year (events/yr)				
350			4500 Exposed surface area (cm2/event)				
351			0.51 Skin adherence factor for soil (mg/cm2)				
352			1 Soil matrix factor				
353			70 Body weight (Kg)				
354			365 Days/yr				
355			1000000 mg/Kg				
356							
357							

$$EDI = C_{soil} * AF * SAF * ESA * NE * SMF / BW / mgKg / DAYR$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-Jun-91

B	C	D	E	F	G
BASE CASE	TABLE 27 FISH INGESTION				
	18-Jun-91 14:11:47	C water SURFACE WATER CONCENTR. mg/L	BCF BIO. CONC. FACTOR	EDI ADULT ESTIMATED DAILY INTAKE mg/kg/day	EDI CHILD ESTIMATED DAILY INTAKE mg/kg/day
359					
360					
361					
362					
363					
364					
365					
366					
367					
368					
369					
370	ORGANICS				
371	Acetonitrile	1.87E-14	0.06	7.76E-21	1.75E-20
372	Aldrin	1.45E-23	28	2.81E-27	6.34E-27
373	Aniline	5.60E-15	6.03	2.33E-19	5.27E-19
374	Atrazine	3.15E-20	0	0.00E+00	0.00E+00
375	Benzaldehyde	4.54E-16	8	2.51E-20	5.67E-20
376	Benzo(furan)	1.27E-15	63	5.53E-19	1.25E-18
377	Benzoic Acid	2.05E-16	15.5	2.20E-20	4.96E-20
378	Benzonitrile	4.80E-15	9	2.99E-19	6.74E-19
379	Benzothiazole	1.83E-20	19.843	2.51E-24	5.67E-24
380	Bis(2-ethylhexyl)phthalate	5.53E-22	850	3.25E-24	7.34E-24
381	Carbazole	2.57E-18	186	3.31E-21	7.46E-21
382	4-Chloroaniline	9.43E-18	14.5	9.45E-22	2.13E-21
383	4-Chlorobiphenyl	8.32E-20	590	3.39E-22	7.66E-22
384	4,4'-Chlorobiphenyl	3.84E-21	215	5.71E-24	1.29E-23
385	Chloroethane	5.03E-19	5.5	1.91E-23	4.32E-23
386	Dibenzofuran	3.97E-18	796.5	2.19E-20	4.94E-20
387	1,2-Dichloroethane	4.14E-18	2	5.73E-23	1.29E-22
388	Dieldrin	2.69E-23	5800	1.08E-24	2.44E-24
389	Hexachlorobenzene	7.16E-18	8690	4.30E-19	9.71E-19
390	Hydrazine	1.82E-15	2.8	3.52E-20	7.96E-20
391	Lindane	5.26E-23	130	4.73E-26	1.07E-25
392	Malathion	3.10E-22	0	0.00E+00	0.00E+00
393	Methyl ethyl ketone	9.04E-20	0	0.00E+00	0.00E+00
394	4-Methylphenol	2.18E-19	18	2.71E-23	6.13E-23
395	Monomethyl hydrazine	5.76E-16	2.8	1.12E-20	2.52E-20
396	Naphthalene	4.99E-17	430	1.48E-19	3.35E-19
397	Naphthalene carbonitrile	1.15E-15	430	3.42E-18	7.72E-18
398	n-Nitrosodimethylamine	5.08E-19	0	0.00E+00	0.00E+00
399	PAHS				
400	Acenaphthalene	2.08E-17	730	1.05E-19	2.37E-19
401	Acenaphthene	2.43E-17	242	4.07E-20	9.18E-20
402	Benzo(a)pyrene	2.18E-17	930	1.40E-19	3.17E-19
403	Chrysene	2.23E-18	23000	3.55E-19	8.01E-19
404	Dibenzo(a,h)anthracene	2.21E-17	520000	7.95E-17	1.79E-16
405	Fluorene	3.25E-18	1300	2.92E-20	6.60E-20
406	Phenanthrene	5.53E-18	2630	1.01E-19	2.27E-19
407	Pyrene	4.55E-17	5100	1.60E-18	3.62E-18
408	Parathion	1.37E-22	335	3.17E-25	7.17E-25
409	Quinoline	4.37E-17	21	6.35E-21	1.43E-20
410	Trichlorobenzene	1.40E-18	991	9.59E-21	2.17E-20
411	Unsym. dimethyl hydrazine	2.27E-15	2.8	4.39E-20	9.92E-20
412	Vapona	4.37E-21	7.0	2.12E-25	4.78E-25
413					
414	INORGANICS				
415	Arsenic	1.80E-13	350	4.36E-15	9.84E-15
416	Copper	6.47E-15	1183	5.29E-16	1.20E-15
417	Zinc	5.07E-14	578	2.03E-15	4.58E-15
418					

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 18-JUN-91

359	B	C	D	E	F	G
360	BASE CASE		TABLE 27			
419						
420						
421			CHILD	ADULT		
422			2.42	4.84	FISH INGESTION RATE g/day	
423			15.5	70	ADULT BODY WEIGHT KG	
424			1000	1000	g/KG	
425			0.1	0.1	Fraction lipid in fillet	

G

TABLE 28
CARCINOGENIC SLOPE FACTORS ((mg/kg-day)⁻¹)

D

E

F

G

H

I

J

K

L

M

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P

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R

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T

U

V

W

X

Y

Z

AA

AB

AC

AD

AE

AF

AG

AH

AI

AJ

AK

AL

AM

AN

AO

AP

AQ

AR

AS

AT

AU

AV

AW

AX

AY

AZ

BA

BB

BC

BD

BE

BF

BG

BH

BI

BJ

BK

BL

BM

BN

BO

BP

BQ

BR

BS

BT

BU

BV

BW

BX

BY

BZ

CA

CB

CC

CD

CE

CF

CG

CH

CI

CJ

CK

CL

CM

CN

CO

CP

CQ

CR

CS

CT

CU

CV

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RJ

RK

RL

RM

RN

RO

RP

RQ

RR

RS

RT

RU

RV

RW

RX

RY

RZ

SA

SB

SC

SD

SE

SF

A	B	C	I	J	K	L	M	N	O
98	TABLE 29								
99	ADULT CARCINOGENIC RISK								
100									
101									
102	RES-A		VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
103	BASE CASE		INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	ADULT
104			CARC.	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.
105			RISK	RISK	RISK	RISK	RISK	RISK	RISK
106									
107									
108	ORGANICS								
109	Acrylonitrile		NA	NA	NA	NA	NA	NA	NA
110	Aldrin		6.32E-17	7.43E-19	1.12E-19	1.68E-19	4.36E-26	1.24E-19	6.44E-17
111	Aniline		3.74E-16	2.31E-21	9.04E-22	2.04E-18	1.22E-21	1.50E-18	3.77E-16
112	Benzene		NA	NA	NA	NA	NA	NA	NA
113	Bis(2-ethylhexyl)phthalate		1.75E-18	5.14E-19	6.14E-20	6.14E-21	4.16E-26	4.51E-21	2.34E-18
114	Carbazole		2.13E-18	8.37E-22	3.22E-22	7.16E-20	6.04E-23	5.27E-20	2.25E-18
115	Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA
116	Chloroform		NA	NA	NA	NA	NA	NA	NA
117	1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		4.69E-17	3.31E-22	1.29E-22	1.67E-19	4.76E-24	1.23E-19	4.72E-17
120	1,1-Dichloroethene		NA	NA	NA	NA	NA	NA	NA
121	1,2-Dichloropropane		NA	NA	NA	NA	NA	NA	NA
122	Dieldrin		7.32E-16	1.25E-19	2.95E-20	2.90E-19	1.58E-23	2.14E-19	7.34E-16
123	Hexachlorobenzene		1.93E-15	1.06E-17	3.21E-18	7.67E-17	6.29E-19	5.65E-17	2.08E-15
124	Hydrazine		9.33E-09	4.47E-18	1.75E-18	1.86E-13	9.66E-20	1.37E-13	9.33E-09
125	Lindane		3.77E-19	1.29E-22	4.98E-23	1.10E-20	5.62E-26	8.06E-21	3.96E-19
126	Methyl chloride		NA	NA	NA	NA	NA	NA	NA
127	Methylene chloride		NA	NA	NA	NA	NA	NA	NA
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		7.41E-10	5.17E-19	2.03E-19	2.15E-14	1.12E-20	1.58E-14	7.41E-10
130	n-Nitrosodimethylamine		2.13E-11	2.48E-19	9.74E-20	1.01E-15	0.00E+00	7.46E-16	2.13E-11
131	PAHs								
132	Benzo(a)pyrene		4.57E-15	1.16E-15	2.51E-16	1.83E-15	1.47E-18	1.35E-15	9.16E-15
133	Chrysene		2.17E-15	4.05E-17	1.11E-17	1.83E-16	3.73E-18	1.35E-16	2.54E-15
134	Dibenzo(a,h)anthracene		6.49E-15	1.34E-15	2.81E-16	1.83E-15	8.35E-16	1.35E-15	1.21E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE
136	Quinoline		1.99E-14	7.28E-19	2.85E-19	2.15E-16	6.96E-20	1.58E-16	2.03E-14
137	Tetrachloroethene		NA	NA	NA	NA	NA	NA	NA
138	Trichloroethene		NA	NA	NA	NA	NA	NA	NA
139	Vapona		4.47E-18	8.29E-23	3.25E-23	4.52E-20	5.61E-26	3.32E-20	4.54E-18
140	Vinyl chloride		NA	NA	NA	NA	NA	NA	NA
141									
142	INORGANICS								
143	Arsenic		5.18E-15	3.24E-15	4.24E-17	3.67E-15	6.97E-15	2.70E-15	2.18E-14
144	Cadmium		NA	NA	NA	NA	NA	NA	NA
145	Chromium (VI)		NA	NA	NA	NA	NA	NA	NA
146									
147	Total		1.01E-08	5.80E-15	5.91E-16	2.16E-13	7.81E-15	1.59E-13	1.01E-08

A	B	C	Q	R	S	T	U	V	W	X
98	99	100	101	102	103	104	105	106	107	
TABLE 30 CHILD CARCINOGENIC RISK										
			INHALATION CARC. RISK	VEGETABLE INGESTION CARC. RISK	MILK INGESTION CARC. RISK	BEEF INGESTION CARC. RISK	SOIL/DUST INGESTION CARC. RISK	FISH INGESTION CARC. RISK	DERMAL EXPOSURE CARC. RISK	TOTAL CHILD CARC. RISK
108	RES-A	ORGANICS								
109	Aladin	Acrylonitrile	3.77E-14	7.40E-18	3.35E-19	2.18E-20	1.19E-19	7.70E-27	8.08E-20	3.77E-14
110	Aniline	1,4-Dichlorobenzene	9.73E-18	5.86E-17	1.04E-21	1.76E-22	1.44E-18	2.15E-22	9.81E-19	1.77E-17
111	Benzene	1,2-Dichloroethane	3.44E-18	2.05E-19	2.32E-19	1.20E-20	4.33E-21	7.34E-27	2.95E-21	1.79E-16
112	Bis(2-ethylhexyl)phthalate	Carbon tetrachloride	3.56E-18	2.73E-19	3.77E-22	6.28E-23	5.05E-20	1.07E-23	3.44E-20	3.44E-18
113	Carbazole	Chloroform	4.15E-18	NA	NA	NA	NA	NA	NA	8.12E-19
114	Carbon tetrachloride	1,1-Dichloroethane	7.82E-17	NA	NA	NA	NA	NA	NA	4.51E-18
115	Chloroform	1,1-Dichloroethane	4.14E-16	NA	NA	NA	NA	NA	NA	7.82E-17
116	1,4-Dichlorobenzene	1,2-Dichloroethane	1.80E-19	NA	NA	NA	NA	NA	NA	4.14E-16
117	1,1-Dichloroethane	1,2-Dichloroethane	1.80E-19	NA	NA	NA	NA	NA	NA	1.80E-19
118	1,2-Dichloroethane	1,2-Dichloroethane	9.66E-18	6.06E-18	1.49E-22	2.52E-23	1.18E-19	8.40E-25	8.01E-20	NE
119	1,2-Dichloroethane	1,2-Dichloroethane	2.18E-16	NA	NA	NA	NA	NA	NA	1.59E-17
120	1,2-Dichloroethane	1,2-Dichloroethane	4.58E-18	8.58E-17	5.64E-20	5.74E-21	2.05E-19	2.78E-24	1.40E-19	2.18E-16
121	Diethylin	Hexachlorobenzene	1.68E-17	2.30E-16	4.80E-18	6.25E-19	5.42E-17	1.11E-19	3.69E-17	4.58E-18
122	Hexachlorobenzene	Hydrazine	4.45E-15	1.37E-09	2.02E-18	3.42E-19	1.31E-13	1.70E-20	8.94E-14	1.03E-16
123	Hydrazine	Lindane	6.14E-11	4.77E-20	5.84E-23	9.71E-24	7.73E-21	9.91E-27	5.27E-21	4.77E-15
124	Lindane	Methyl chloride	6.35E-19	NA	NA	NA	NA	NA	NA	1.43E-09
125	Methyl chloride	Methylene chloride	8.89E-19	NA	NA	NA	NA	NA	NA	6.96E-19
126	Methylene chloride	4-Methylphenol	1.19E-16	NA	NA	NA	NA	NA	NA	8.89E-19
127	4-Methylphenol	Monomethyl hydrazine	1.25E-12	1.19E-10	2.33E-19	3.95E-20	1.52E-14	1.98E-21	1.03E-14	1.19E-16
128	Monomethyl hydrazine	n-Nitrosodimethylamine	5.87E-14	2.56E-12	1.12E-19	1.90E-20	7.15E-16	0.00E+00	4.87E-16	NE
129	n-Nitrosodimethylamine	PAHs								1.20E-10
130	PAHs	Benzo(a)pyrene	5.62E-14	6.06E-16	5.24E-16	4.88E-17	1.29E-15	2.60E-19	8.80E-16	2.62E-12
131	Benzo(a)pyrene	Chrysene	5.62E-15	2.62E-16	1.83E-17	2.16E-18	1.29E-16	6.58E-19	8.80E-17	5.96E-14
132	Chrysene	Dibenz(a,h)anthracene	5.62E-14	8.30E-16	6.06E-16	5.47E-17	1.29E-15	1.47E-16	8.80E-16	6.12E-15
133	Dibenz(a,h)anthracene	Parathion	NE	NE	NE	NE	NE	NE	NE	6.01E-14
134	Parathion	Quinoline	1.25E-14	2.69E-15	3.28E-19	5.54E-20	1.52E-16	1.23E-20	1.03E-16	NE
135	Quinoline	Tetrachloroethene	6.42E-20	NA	NA	NA	NA	NA	NA	1.54E-14
136	Tetrachloroethene	Trichloroethene	2.28E-18	NA	NA	NA	NA	NA	NA	6.42E-20
137	Trichloroethene	Vapona	2.62E-18	6.92E-19	3.74E-23	6.33E-24	3.19E-20	9.89E-27	2.17E-20	2.28E-18
138	Vapona	Vinyl chloride	3.50E-17	NA	NA	NA	NA	NA	NA	3.36E-18
139	Vinyl chloride									3.50E-17
140										
141										
142	INORGANICS									
143	Arsenic		1.82E-12	7.30E-16	1.46E-15	8.26E-18	2.59E-15	1.23E-15	1.77E-15	1.83E-12
144	Cadmium		4.30E-15	NA	NA	NA	NA	NA	NA	4.30E-15
145	Chromium (VI)		4.51E-15	NA	NA	NA	NA	NA	NA	4.51E-15
146										
147	Total		6.47E-11	1.49E-09	2.62E-15	1.15E-16	1.53E-13	1.38E-15	1.04E-13	1.55E-09

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	Z	AA	AB
98			TABLE 31		
99			INFANT CARCINOGENIC RISK		
100					
101					
102					
103	RES-A				
104	BASE CASE				
105					
106					
107					
108	ORGANICS				
109	Acrylonitrile		2.46E-14	1.71E-16	2.48E-14
110	Aldrin		6.37E-18	2.12E-17	2.76E-17
111	Aniline		7.74E-17	2.17E-16	2.94E-16
112	Benzene		2.25E-18	2.61E-21	2.26E-18
113	Bis(2-ethylhexyl)phthalate		2.33E-19	1.80E-18	2.03E-18
114	Carbazole		2.71E-18	6.99E-18	9.70E-18
115	Carbon Tetrachloride		5.12E-17	8.89E-19	5.21E-17
116	Chloroform		2.71E-16	3.54E-19	2.71E-16
117	1,4-Dichlorobenzene		1.18E-19	2.05E-21	1.20E-19
118	1,1-Dichloroethane		NE	NE	NE
119	1,2-Dichloroethane		6.32E-18	1.87E-17	2.50E-17
120	1,1-Dichloroethene		1.43E-16	1.24E-18	1.44E-16
121	1,2-Dichloropropane		2.99E-18	5.20E-20	3.05E-18
122	Dieldrin		1.10E-17	7.03E-17	8.13E-17
123	Hexachlorobenzene		2.91E-15	1.69E-15	4.60E-15
124	Hydrazine		4.02E-11	5.56E-10	5.96E-10
125	Lindane		4.16E-19	1.07E-18	1.49E-18
126	Methyl chloride		5.82E-19	2.08E-20	6.02E-19
127	Methylene chloride		7.80E-17	7.25E-19	7.87E-17
128	4-Methylphenol		NE	NE	NE
129	Monomethyl hydrazine		8.15E-13	4.48E-11	4.56E-11
130	n-Nitrosodimethylamine		3.84E-14	1.33E-12	1.37E-12
131	PAHs				
132	Benzo(a)pyrene		3.68E-14	1.77E-13	2.14E-13
133	Chrysene		3.68E-15	1.77E-14	2.14E-14
134	Dibenzo(a,h)anthracene		3.68E-14	1.78E-13	2.15E-13
135	Parathion		NE	NE	NE
136	Quinoline		8.16E-15	2.18E-14	2.99E-14
137	Tetrachloroethene		4.20E-20	1.13E-20	5.33E-20
138	Trichloroethene		1.49E-18	2.59E-20	1.52E-18
139	Vapona		1.71E-18	4.59E-18	6.30E-18
140	Vinyl chloride		2.29E-17	3.10E-18	2.60E-17
141					
142	INORGANICS				
143	Arsenic		1.19E-12	NA	1.19E-12
144	Cadmium		2.82E-15	NA	2.82E-15
145	Chromium (VI)		2.93E-15	NA	2.93E-15
146					
147	Total		4.24E-11	6.03E-10	6.45E-10

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL																																					
98	99	RES-A BASE CASE	TABLE 32 TOTAL LIFETIME CARCINOGENIC RISK																																													
100	101		102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147
			INHALATION CARC. RISK	BREAST MILK INGESTION CARC. RISK	VEGETABLE INGESTION CARC. RISK	MILK INGESTION CARC. RISK	BEEF INGESTION CARC. RISK	SOIL/DUST INGESTION CARC. RISK	FISH INGESTION CARC. RISK	DERMAL EXPOSURE CARC. RISK	TOTAL LIFETIME CARC. RISK																																					
			6.23E-14	1.71E-16	NA	NA	NA	NA	NA	NA	6.25E-14																																					
			1.61E-17	2.12E-17	7.06E-17	1.08E-18	1.34E-19	2.87E-19	5.13E-26	2.04E-19	1.10E-16																																					
			1.96E-16	2.17E-16	4.32E-16	3.35E-21	1.08E-21	3.48E-18	1.43E-21	2.48E-18	8.51E-16																																					
			5.70E-18	2.61E-21	NA	NA	NA	NA	NA	NA	5.70E-18																																					
			5.88E-19	1.80E-18	1.96E-18	7.46E-19	7.33E-20	1.05E-20	4.89E-26	7.46E-21	5.18E-18																																					
			6.86E-18	6.99E-18	2.40E-18	1.21E-21	3.85E-22	1.22E-19	7.11E-23	8.71E-20	1.65E-17																																					
			1.29E-16	8.89E-19	NA	NA	NA	NA	NA	NA	1.30E-16																																					
			6.85E-16	3.54E-19	NA	NA	NA	NA	NA	NA	6.85E-16																																					
			2.98E-19	2.05E-21	NA	NA	NA	NA	NA	NA	3.00E-19																																					
			1.60E-17	1.87E-17	5.30E-17	4.80E-22	1.55E-22	2.84E-19	5.60E-24	2.03E-19	8.81E-17																																					
			3.61E-16	1.24E-18	NA	NA	NA	NA	NA	NA	3.62E-16																																					
			7.57E-18	5.20E-20	NA	NA	NA	NA	NA	NA	7.62E-18																																					
			2.78E-17	7.03E-17	8.19E-16	1.81E-19	3.52E-20	4.95E-19	1.86E-23	3.53E-19	9.18E-16																																					
			7.36E-15	1.69E-15	2.16E-15	1.54E-17	3.83E-18	1.31E-16	7.40E-19	9.33E-17	1.14E-14																																					
			1.02E-10	5.56E-10	1.07E-08	6.49E-18	2.10E-18	3.17E-13	1.14E-19	2.26E-13	1.14E-08																																					
			1.05E-18	1.07E-18	4.25E-19	1.88E-22	5.95E-23	1.87E-20	6.61E-26	1.33E-20	2.58E-18																																					
			1.47E-18	2.08E-20	NA	NA	NA	NA	NA	NA	1.49E-18																																					
			1.97E-16	7.25E-19	NA	NA	NA	NA	NA	NA	1.98E-16																																					
			NE	NE	NE	NE	NE	NE	NE	NE	NE																																					
			2.06E-12	4.48E-11	8.60E-10	7.50E-19	2.42E-19	3.67E-14	1.32E-20	2.61E-14	9.07E-10																																					
			9.72E-14	1.33E-12	2.39E-11	3.61E-19	1.16E-19	1.73E-15	0.00E+00	1.23E-15	2.53E-11																																					
			9.30E-14	1.77E-13	5.17E-15	1.69E-15	2.99E-16	3.12E-15	1.73E-18	2.23E-15	2.83E-13																																					
			9.30E-15	1.77E-14	2.43E-15	5.88E-17	1.33E-17	3.12E-16	4.39E-18	2.23E-16	3.01E-14																																					
			9.30E-14	1.78E-13	7.32E-15	1.95E-15	3.35E-16	3.12E-15	9.83E-16	2.23E-15	2.87E-13																																					
			NE	NE	NE	NE	NE	NE	NE	NE	NE																																					
			2.06E-14	2.18E-14	2.26E-14	1.06E-18	3.40E-19	3.67E-16	8.19E-20	2.62E-16	6.56E-14																																					
			1.06E-19	1.13E-20	NA	NA	NA	NA	NA	NA	1.17E-19																																					
			3.77E-18	2.59E-20	NA	NA	NA	NA	NA	NA	3.80E-18																																					
			4.33E-18	4.59E-18	5.16E-18	1.20E-22	3.88E-23	7.71E-20	6.60E-26	5.49E-20	1.42E-17																																					
			5.79E-17	3.10E-18	NA	NA	NA	NA	NA	NA	6.10E-17																																					
			INORGANICS																																													
			3.02E-12	NA	5.91E-15	4.69E-15	5.07E-17	6.27E-15	8.20E-15	4.47E-15	3.05E-12																																					
			7.12E-15	NA	NA	NA	NA	NA	NA	NA	7.12E-15																																					
			7.46E-15	NA	NA	NA	NA	NA	NA	NA	7.46E-15																																					
			1.07E-10	6.03E-10	1.16E-08	8.41E-15	7.06E-16	3.69E-13	9.19E-15	2.63E-13	1.23E-08																																					

A	B	C	AN	AO	AP	AQ
98			TABLE 33			
99			TOTAL LIFETIME			
100			CARCINOGENIC RISK			
101						
102	RES-A		INHALATION	INGESTION	DERMAL	TOTAL
103			CARC.	CARC.	CARC.	LIFETIME
104	BASE CASE		RISK	RISK	RISK	CARC.
105						RISK
106						
107						
108	ORGANICS					
109	Acrylonitrile		6.23E-14	1.71E-16	NA	6.25E-14
110	Aldrin		1.61E-17	9.33E-17	2.04E-19	1.10E-16
111	Aniline		1.96E-16	6.53E-16	2.48E-18	8.51E-16
112	Benzene		5.70E-18	2.61E-21	NA	5.70E-18
113	Bis(2-ethylhexyl)phthalate		5.88E-19	4.59E-18	7.46E-21	5.18E-18
114	Carbazole		6.86E-18	9.51E-18	8.71E-20	1.65E-17
115	Carbon Tetrachloride		1.29E-16	8.89E-19	NA	1.30E-16
116	Chloroform		6.85E-16	3.54E-19	NA	6.85E-16
117	1,4-Dichlorobenzene		2.98E-19	2.05E-21	NA	3.00E-19
118	1,1-Dichloroethane		NE	NE	NE	NE
119	1,2-Dichloroethane		1.60E-17	7.20E-17	2.03E-19	8.81E-17
120	1,1-Dichloroethene		3.61E-16	1.24E-18	NA	3.62E-16
121	1,2-Dichloropropane		7.57E-18	5.20E-20	NA	7.62E-18
122	Dieldrin		2.78E-17	8.90E-16	3.53E-19	9.18E-16
123	Hexachlorobenzene		7.36E-15	4.00E-15	9.33E-17	1.14E-14
124	Hydrazine		1.02E-10	1.13E-08	2.26E-13	1.14E-08
125	Lindane		1.05E-18	1.52E-18	1.53E-20	2.58E-18
126	Methyl chloride		1.47E-18	2.08E-20	NA	1.49E-18
127	Methylene chloride		1.97E-16	7.25E-19	NA	1.98E-16
128	4-Methylphenol		NE	NE	NE	NE
129	Monomethyl hydrazine		2.06E-12	9.05E-10	2.61E-14	9.07E-10
130	n-Nitrosodimethylamine		9.72E-14	2.52E-11	1.23E-15	2.53E-11
131	PAHs					
132	Benzo(a)pyrene		9.30E-14	1.88E-13	2.23E-15	2.83E-13
133	Chrysene		9.30E-15	2.05E-14	2.23E-16	3.01E-14
134	Dibenzo(a,h)anthracene		9.30E-14	1.92E-13	2.23E-15	2.87E-13
135	Parathion		NE	NE	NE	NE
136	Quinoline		2.06E-14	4.48E-14	2.62E-16	6.56E-14
137	Tetrachloroethene		1.06E-19	1.13E-20	NA	1.17E-19
138	Trichloroethene		3.77E-18	2.59E-20	NA	3.80E-18
139	Vapona		4.33E-18	9.82E-18	5.49E-20	1.42E-17
140	Vinyl chloride		5.79E-17	3.10E-18	NA	6.10E-17
141						
142	INORGANICS					
143	Arsenic		3.02E-12	2.51E-14	4.47E-15	3.05E-12
144	Cadmium		7.12E-15	NA	NA	7.12E-15
145	Chromium (VI)		7.46E-15	NA	NA	7.46E-15
146						
147	Total		1.07E-10	1.22E-08	2.63E-13	1.23E-08

TABLE 34
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D Inhalation Rfd	E Oral Rfd	F Dermal Rfd
155	161 RES-A			
156	162 BASE CASE			
157	163			
158	164			
159	165			
160	166 ORGANICS			
161	Acetone	1.82E+00	1.00E-01	NC
162	Acetonitrile	1.00E-02	6.00E-02	3.00E-02
163	Acrylonitrile	4.39E-03	2.70E-04	NC
164	Aldrin	2.55E-04	3.00E-05	1.50E-05
165	Aniline	7.76E-03	1.95E-03	9.75E-04
166	Atrazine	5.10E-03	5.00E-03	2.50E-03
167	Benzaldehyde	1.00E-01	1.00E-01	5.00E-02
168	Benzene	3.26E-02	1.00E-03	NC
169	Benzo(a)pyrene	5.00E-03	5.00E-03	2.50E-03
170	Benzo(b)fluoranthene	4.00E+00	4.00E+00	2.00E+00
171	Benzo(k)fluoranthene	8.00E-03	8.00E-03	4.00E-03
172	Benzo(a)anthracene	1.00E-03	1.00E-03	5.00E-04
173	Benzothiazole	1.33E-03	5.00E-02	NC
174	Biphenyl	5.10E-03	4.00E-03	1.00E-02
175	Bis(2-ethylhexyl)phthalate	5.00E-03	5.00E-03	2.50E-03
176	Carbazole	3.16E-02	7.00E-04	NC
177	Carbon Tetrachloride	4.00E-03	4.00E-03	2.00E-03
178	4-Chloroaniline	5.00E-03	2.00E-02	NC
179	Chlorobenzene	2.45E-02	2.45E-02	1.22E-02
180	4-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
181	4,4'-Dichlorobiphenyl	2.65E+00	NA	NC
182	Chloroethane	5.00E-02	1.00E-02	NC
183	Chloroform	NA	NA	NA
184	Dibenzofuran	4.00E-02	9.00E-02	NC
185	Dichlorobenzenes (total)	1.00E-01	1.00E-01	NC
186	1,1-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
187	1,2-Dichloroethane	2.04E-02	9.00E-03	NC
188	1,1-Dichloroethene	8.10E-01	2.00E-02	NC
189	1,2-Dichloroethene	3.54E-01	8.60E-03	NC
190	Dieldrin	2.55E-04	5.00E-05	2.50E-05
191	Dimethyldisulfide	8.10E-03	8.10E-03	NC
192	Hexachlorobenzene	8.00E-04	8.00E-04	4.00E-04
193	Hydrazine	1.33E-04	6.00E-04	3.00E-04
194	Lindane	5.10E-04	3.00E-04	1.50E-04
195	Malathion	1.02E-02	2.00E-02	1.00E-02
196	Methyl chloride	1.05E-01	1.80E-02	NC
197	Methylene chloride	8.57E-01	6.00E-02	NC
198	Methyl ethyl ketone	9.00E-02	5.00E-01	2.50E-01
199	4-Methylphenol	1.02E-02	5.00E-02	2.50E-02
200	Monomethyl hydrazine	1.94E-05	2.20E-04	1.10E-04
201	Naphthalene	5.10E-02	4.00E-03	2.00E-03
202	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
203	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
204	PAHs			
205	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
206	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
207	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
208	Chrysene	3.00E-02	3.00E-02	1.50E-02

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 34		
156		3.00E-02	3.00E-02	1.50E-02
215	Dibenzo(a,h)anthracene	4.00E-02	4.00E-02	2.00E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Fluorene	3.00E-02	3.00E-02	1.50E-02
218	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
219	Pyrene	5.10E-05	6.00E-03	3.00E-03
220	Parathion	8.00E-04	8.00E-04	4.00E-04
221	Pentachlorobenzene	1.94E-02	6.00E-01	3.00E-01
222	Phenol	1.63E-02	1.00E-03	NC
223	Pyridine	2.00E-01	2.00E-01	1.00E-01
224	Quinoline	3.00E-04	3.00E-04	1.50E-04
225	Tetrachlorobenzene	3.46E-01	1.00E-02	NC
226	Tetrachloroethene	5.71E-01	2.00E-01	NC
227	Toluene	3.00E-03	2.00E-02	1.00E-02
228	Trichlorobenzene	2.74E-01	7.35E-03	NC
229	Trichloroethene	1.22E-03	1.22E-03	6.10E-04
230	Unsym. dimethyl hydrazine	8.00E-04	8.00E-04	4.00E-04
231	Vapona	2.00E-01	1.00E+00	NC
232	Vinyl acetate	1.33E-02	1.30E-03	NC
233	Vinyl chloride	8.57E-02	2.00E+00	NC
234	Xylenes (total)			
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

TABLE 35 ADULT HAZARD INDEX										H	I	J	K	L	M	N	O
B	C	INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX								
155	RES-A	6.94E-15	NA	NA	NA	NA	NA	NA	6.94E-15								
156	BASE CASE	1.14E-09	2.05E-10	4.04E-17	1.57E-17	1.18E-13	1.29E-19	8.66E-14	1.35E-09								
157		1.11E-09	NA	NA	NA	NA	NA	NA	1.11E-09								
158		6.96E-14	1.53E-13	4.83E-14	5.48E-15	3.66E-16	9.36E-23	2.69E-16	2.77E-13								
159		8.28E-11	4.58E-11	2.38E-16	9.12E-17	2.04E-13	1.20E-16	1.50E-13	1.29E-10								
160		7.79E-13	4.38E-14	4.33E-18	1.35E-18	4.91E-16	0.00E+00	3.61E-16	8.23E-13								
161		2.93E-12	2.39E-13	3.87E-18	1.44E-18	1.81E-15	2.51E-19	1.33E-15	3.17E-12								
162		1.13E-13	NA	NA	NA	NA	NA	NA	1.13E-13								
163		2.85E-10	1.58E-11	1.53E-15	4.80E-16	1.76E-13	1.11E-16	1.29E-13	3.01E-10								
164		3.59E-14	2.22E-15	7.25E-20	2.60E-20	2.21E-17	5.49E-21	1.63E-17	3.81E-14								
165		3.91E-10	2.99E-11	5.63E-16	2.08E-16	2.42E-13	3.73E-17	1.78E-13	4.21E-10								
166	ORGANICS	1.33E-12	7.62E-14	3.16E-18	1.12E-18	8.24E-16	2.51E-21	6.06E-16	1.41E-12								
167	Acetone	1.08E-09	NA	NA	NA	NA	NA	NA	1.08E-09								
168	Acetonitrile	1.54E-13	3.98E-14	3.42E-13	3.84E-14	1.22E-16	8.13E-22	1.79E-17	5.75E-13								
169	Acrylonitrile	1.29E-12	5.68E-14	1.72E-17	4.46E-18	7.94E-16	6.61E-19	5.84E-16	1.34E-12								
170	Aldrin	5.90E-13	NA	NA	NA	NA	NA	NA	5.90E-13								
171	Aniline	9.20E-14	5.54E-15	1.79E-19	6.41E-20	5.68E-17	2.36E-19	4.18E-17	9.76E-14								
172	Atrazine	1.77E-13	NA	NA	NA	NA	NA	NA	1.77E-13								
173	Benzaldehyde	3.70E-14	1.26E-15	1.07E-17	1.55E-18	2.29E-17	1.39E-20	1.69E-17	3.83E-14								
174	Benzene	1.96E-15	6.28E-17	2.54E-18	3.20E-19	1.21E-18	2.45E-22	8.94E-19	2.03E-15								
175	Benzofuran	1.23E-14	NE	NE	NE	NE	NE	NE	1.23E-14								
176	Benzoic Acid	3.17E-12	NA	NA	NA	NA	NA	NA	3.17E-12								
177	Benzonitrile	NE	NE	NE	NE	NE	NE	NE	NE								
178	Benzothiazole	NE	NE	NE	NE	NE	NE	NE	NE								
179	Biphenyl	NE	NE	NE	NE	NE	NE	NE	NE								
180	Bis(2-ethylhexyl)phthalate	9.20E-14	NA	NA	NA	NA	NA	NA	9.20E-14								
181	Carbazole	1.05E-13	NA	NA	NA	NA	NA	NA	1.05E-13								
182	Carbon Tetrachloride	8.06E-14	1.34E-13	8.88E-19	3.30E-19	4.16E-16	1.17E-20	3.06E-16	2.16E-13								
183	4-Chloroaniline	2.76E-13	NA	NA	NA	NA	NA	NA	2.76E-13								
184	Chlorobenzene	6.02E-15	NA	NA	NA	NA	NA	NA	6.02E-15								
185	4-Chlorobiphenyl	5.89E-15	NA	NA	NA	NA	NA	NA	5.89E-15								
186	4,4'-Chlorobiphenyl	1.28E-13	1.03E-12	3.42E-15	4.03E-16	4.03E-16	2.16E-20	2.96E-16	5.89E-15								
187	Chloroethane	1.11E-12	4.46E-12	1.09E-13	1.40E-14	6.65E-14	5.38E-16	4.89E-14	1.17E-12								
188	Chloroform	1.08E-10	4.46E-12	2.76E-15	1.08E-15	1.15E-10	5.87E-17	8.43E-11	1.12E-10								
189	Dibenzofuran	8.37E-07	5.76E-06	6.85E-19	1.77E-19	3.12E-17	1.58E-22	2.29E-17	6.59E-06								
190	Dichlorobenzenes (total)	2.97E-14	8.49E-17	6.85E-19	4.82E-21	1.38E-18	0.00E+00	1.02E-18	3.21E-14								
191	1,1-Dichloroethane	4.97E-15	NA	1.63E-20	4.82E-21	NA	NA	NA	4.47E-15								
192	1,2-Dichloroethane	3.08E-13	NA	NA	NA	NA	NA	NA	4.16E-14								
193	1,1-Dichloroethene	6.14E-14	5.85E-15	4.22E-21	1.64E-21	NA	0.00E+00	5.02E-18	3.08E-13								
194	1,2-Dichloroethene	4.92E-13	1.03E-14	2.20E-19	7.82E-20	6.20E-17	5.43E-22	4.56E-17	6.73E-14								
195	1,2-Dichloropropane	4.92E-13	3.40E-06	2.37E-15	9.30E-16	6.20E-17	5.07E-17	7.25E-11	5.02E-13								
196	Dieldrin	1.81E-06	7.54E-15	2.18E-18	5.53E-19	9.14E-17	3.71E-17	6.72E-17	5.21E-06								
197	Dimethyldisulfide	1.16E-14	3.99E-11	1.15E-14	2.92E-15	9.14E-17	8.55E-16	3.56E-13	1.93E-14								
198	Hexachlorobenzene	6.14E-11	1.66E-09	1.94E-17	7.58E-18	7.88E-14	0.00E+00	5.79E-14	1.02E-10								
199	Hydrazine	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	1.79E-09								
200	Lindane	2.53E-12	9.17E-14	9.46E-17	1.92E-17	1.47E-15	6.78E-19	1.08E-15	2.50E-12								
201	Malathion	9.53E-13	2.61E-13	8.25E-14	9.63E-15	5.89E-15	4.67E-18	4.53E-15	2.47E-12								
202	Methyl chloride	9.53E-13	3.16E-14	1.98E-15	2.43E-16	5.89E-16	1.18E-17	4.33E-16	9.88E-13								
203	Methylene chloride	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12								
204	Methyl ethyl ketone	2.53E-12	9.17E-14	9.46E-17	1.92E-17	1.47E-15	6.78E-19	1.08E-15	2.47E-12								
205	4-Methylphenol	9.53E-13	3.16E-14	1.98E-15	2.43E-16	5.89E-16	1.18E-17	4.33E-16	9.88E-13								
206	Monomethyl hydrazine	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12								
207	Naphthalene	2.53E-12	9.17E-14	9.46E-17	1.92E-17	1.47E-15	6.78E-19	1.08E-15	2.47E-12								
208	Naphthalene carbonitrile	9.53E-13	3.16E-14	1.98E-15	2.43E-16	5.89E-16	1.18E-17	4.33E-16	9.88E-13								
209	n-Nitrosodimethylamine	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12								
210	PAHs	2.53E-12	9.17E-14	9.46E-17	1.92E-17	1.47E-15	6.78E-19	1.08E-15	2.47E-12								
211	Acenaphthalene	9.53E-13	3.16E-14	1.98E-15	2.43E-16	5.89E-16	1.18E-17	4.33E-16	9.88E-13								
212	Acenaphthene	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12								
213	Benzo(a)pyrene	2.53E-12	9.17E-14	9.46E-17	1.92E-17	1.47E-15	6.78E-19	1.08E-15	2.47E-12								
214	Chrysene	9.53E-13	3.16E-14	1.98E-15	2.43E-16	5.89E-16	1.18E-17	4.33E-16	9.88E-13								

B	C	H	I	J	K	L	M	N	O
155		TABLE 35							
156		9.53E-12	2.67E-13	9.90E-14	1.15E-14	5.89E-15	2.65E-15	4.33E-15	9.92E-12
215	Dibenzo(a,h)anthracene	7.15E-12	2.80E-13	4.16E-15	5.58E-16	4.41E-15	NA	3.25E-15	7.44E-12
216	Fluoranthene	7.15E-13	3.01E-14	6.99E-17	1.19E-17	4.41E-16	7.30E-19	3.25E-16	7.45E-13
217	Fluorene	3.71E-15	1.41E-16	5.36E-19	8.53E-20	2.29E-18	3.35E-18	1.69E-18	3.86E-15
218	Phenanthrene	1.91E-11	7.31E-13	1.02E-14	1.37E-15	1.18E-14	5.35E-17	8.66E-15	1.98E-11
219	Pyrene	1.39E-12	4.64E-16	3.84E-19	8.15E-20	7.29E-18	5.29E-23	5.36E-18	1.39E-12
220	Parathion	4.39E-11	2.41E-12	1.88E-14	2.60E-15	2.71E-14	NA	1.99E-14	4.64E-11
221	Pentachlorobenzene	2.89E-14	1.87E-16	1.21E-21	4.50E-22	5.78E-19	NA	4.25E-19	2.91E-14
222	Phenol	1.92E-10	NA	NA	NA	NA	NA	NA	1.92E-10
223	Pyridine	1.61E-13	1.34E-14	3.91E-19	1.38E-19	9.94E-17	3.17E-20	7.32E-17	1.75E-13
224	Quinoline	5.75E-11	5.34E-12	5.51E-15	9.40E-16	3.55E-14	NA	2.61E-14	6.29E-11
225	Tetrachlorobenzene	1.74E-15	NA	NA	NA	NA	NA	NA	1.74E-15
226	Tetrachloroethene	1.68E-14	1.48E-14	1.95E-17	3.86E-18	2.70E-16	4.80E-19	1.98E-16	1.68E-14
227	Toluene	2.91E-12	NA	NA	NA	NA	NA	NA	2.93E-12
228	Trichlorobenzene	2.35E-14	NA	NA	NA	NA	NA	NA	2.35E-14
229	Trichloroethene	1.13E-07	1.58E-06	3.19E-15	1.25E-15	7.01E-11	3.60E-17	5.16E-11	1.69E-06
230	Unsym. dimethyl hydrazine	3.50E-13	3.04E-14	4.24E-19	1.58E-19	2.16E-16	2.64E-22	1.59E-16	3.81E-13
231	Vapona	1.99E-14	NA	NA	NA	NA	NA	NA	1.99E-14
232	Vinyl acetate	2.77E-13	NA	NA	NA	NA	NA	NA	2.77E-13
233	Vinyl chloride	8.00E-15	NA	NA	NA	NA	NA	NA	8.00E-15
234	Ylenes (total)								
235									
236	INORGANICS								
237	Arsenic	1.85E-08	1.01E-10	1.08E-11	1.33E-13	2.33E-12	4.36E-12	1.71E-12	1.86E-08
238	Cadmium	4.29E-10	6.26E-13	1.27E-14	3.54E-16	1.35E-14	NA	9.94E-15	4.29E-10
239	Chromium (III)	1.90E-10	NA	NA	NA	NA	NA	NA	1.90E-10
240	Chromium (VI)	6.69E-11	NA	NA	NA	NA	NA	NA	6.69E-11
241	Copper	1.43E-11	NA	NA	NA	NA	1.39E-14	NA	1.44E-11
242	Iron	3.41E-06	NA	NA	NA	NA	NA	NA	3.41E-06
243	Mercury	1.65E-09	1.39E-11	1.18E-13	4.35E-12	2.91E-13	NA	2.14E-13	1.67E-09
244	Selenium	2.10E-09	NA	NA	NA	NA	NA	NA	2.10E-09
245	Silver	1.92E-10	NA	NA	NA	NA	NA	NA	1.92E-10
246	Zinc	1.37E-10	NA	NA	NA	NA	1.01E-14	NA	1.37E-10
247									
248	Total (Hazard Index)	6.20E-06	1.07E-05	1.17E-11	4.58E-12	2.87E-10	4.38E-12	2.11E-10	1.69E-05

B	C	Q CHILD HAZARD INDEX	R VEGETABLE INGESTION HAZARD QUOTIENT	S MILK INGESTION HAZARD QUOTIENT	T BEEF INGESTION HAZARD QUOTIENT	U SOIL/DUST INGESTION HAZARD QUOTIENT	V FISH INGESTION HAZARD QUOTIENT	W DERMAL EXPOSURE HAZARD QUOTIENT	X TOTAL CHILD HAZARD INDEX
155	RES-A BASE CASE	INHALE HAZARD QUOTIENT	INGESTION HAZARD QUOTIENT	INGESTION HAZARD QUOTIENT	INGESTION HAZARD QUOTIENT	INGESTION HAZARD QUOTIENT	INGESTION HAZARD QUOTIENT	EXPOSURE HAZARD QUOTIENT	Hazard Index
156									
157									
158									
159									
160									
161	ORGANICS								
162	Acetone	1.57E-14	NA	2.33E-16	3.93E-17	1.06E-12	2.92E-19	7.24E-13	1.57E-14
163	Acetonitrile	2.58E-09	3.66E-10	2.33E-16	NA	NA	NA	NA	2.95E-09
164	Acrylonitrile	2.50E-09	NA	NA	NA	NA	NA	NA	2.50E-09
165	Aldrin	1.57E-13	2.35E-13	2.79E-13	1.37E-14	3.30E-15	2.11E-22	2.25E-15	6.90E-13
166	Aniline	1.87E-10	9.07E-11	1.38E-15	2.27E-16	1.84E-12	2.70E-16	1.25E-12	2.81E-10
167	Atrazine	1.76E-12	7.74E-14	2.50E-17	3.38E-18	4.43E-15	0.00E+00	3.02E-15	1.84E-12
168	Benzaldehyde	6.61E-12	4.63E-13	2.23E-17	3.58E-18	1.63E-14	5.67E-19	1.11E-14	7.10E-12
169	Benzene	2.55E-13	NA	NA	NA	NA	NA	NA	2.55E-13
170	Benzofuran	6.43E-10	2.79E-11	8.85E-15	1.20E-15	1.59E-12	2.50E-16	1.08E-12	6.74E-10
171	Benzoic Acid	8.10E-14	4.23E-15	4.19E-19	6.49E-20	2.00E-16	1.24E-20	1.36E-16	8.55E-14
172	Benzonitrile	8.83E-10	5.78E-11	3.25E-15	5.18E-16	2.78E-12	8.43E-17	1.49E-12	9.43E-10
173	Benzothiazole	3.01E-12	1.44E-13	1.83E-17	2.79E-18	7.44E-15	5.67E-21	5.07E-15	3.17E-12
174	Biphenyl	2.43E-09	NA	NA	NA	NA	NA	NA	2.43E-09
175	Bis(2-ethylhexyl)phthalate	3.49E-13	6.15E-14	1.98E-12	9.59E-14	1.10E-15	1.83E-21	1.50E-16	2.48E-12
176	Carbazole	2.90E-12	1.00E-13	9.91E-17	1.11E-17	7.17E-15	1.49E-18	4.89E-15	3.02E-12
177	Carbon Tetrachloride	1.33E-12	NA	NA	NA	NA	NA	NA	1.33E-12
178	4-Chloroaniline	2.08E-13	1.07E-14	1.03E-18	1.60E-19	5.13E-16	5.34E-19	3.50E-16	2.19E-13
179	Chlorobenzene	3.99E-13	NA	NA	NA	NA	NA	NA	3.99E-13
180	4-Chlorobiphenyl	8.36E-14	2.24E-15	6.21E-17	3.87E-18	2.06E-16	3.13E-20	1.41E-16	8.62E-14
181	4,4'-Dichlorodiphenyl Chloroethane	4.42E-15	1.13E-16	1.46E-17	7.97E-19	1.09E-17	5.53E-22	7.48E-18	4.57E-15
182	Chloroform	2.77E-14	NE	NE	NE	NE	NE	NE	2.77E-14
183	Dibenzofuran	7.16E-12	NE	NE	NE	NE	NE	NE	7.16E-12
184	Dichlorobenzenes (total)	NE	NE	NE	NE	NE	NE	NE	NE
185	1,1-Dichloroethane	2.08E-13	NA	NA	NA	NA	NA	NA	2.08E-13
186	1,2-Dichloroethane	2.38E-13	NA	NA	NA	NA	NA	NA	2.38E-13
187	1,1-Dichloroethylene	1.82E-13	2.25E-13	5.13E-18	8.23E-19	3.75E-15	2.64E-20	2.56E-15	4.14E-13
188	1,2-Dichloroethene	6.24E-13	NA	NA	NA	NA	NA	NA	6.24E-13
189	1,2-Dichloropropane	1.36E-14	NA	NA	NA	NA	NA	NA	1.36E-14
190	Dieldrin	1.33E-14	NA	NA	NA	NA	NA	NA	1.33E-14
191	Dimethyldisulfide	2.89E-13	1.55E-12	1.98E-14	1.01E-15	3.64E-15	4.87E-20	2.48E-15	1.87E-12
192	Hexachlorobenzene	2.50E-12	NA	NA	NA	NA	NA	NA	2.50E-12
193	Hydrazine	2.43E-10	7.71E-12	6.30E-13	3.48E-14	6.01E-13	1.21E-15	4.09E-13	2.53E-1

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	Q	R	S	T	U	V	W	X
155		TABLE 36							
156		2.15E-11	4.91E-13	5.72E-13	2.87E-14	5.32E-14	5.98E-15	3.62E-14	2.27E-11
215	Dibenzo(a,h)anthracene	1.61E-11	4.89E-13	2.40E-14	1.39E-15	3.99E-14	NA	2.72E-14	1.67E-11
216	Fluoranthene	1.61E-12	5.22E-14	4.04E-16	2.96E-17	3.99E-15	1.65E-18	2.72E-15	1.67E-12
217	Fluorene	8.38E-15	2.47E-16	3.10E-18	2.13E-19	2.07E-17	7.57E-18	1.41E-17	8.67E-15
218	Phenanthrene	4.30E-11	1.28E-12	5.87E-14	3.42E-15	1.06E-13	1.21E-16	7.24E-14	4.45E-11
219	Pyrene	3.13E-12	8.20E-16	2.22E-18	2.03E-19	6.58E-17	1.19E-22	4.49E-17	3.14E-12
220	Parathion	9.91E-11	4.04E-12	1.09E-13	6.48E-15	2.45E-13	NA	1.67E-13	1.04E-10
221	Pentachlorobenzene	6.54E-14	3.14E-16	6.99E-21	1.12E-21	5.22E-18	NA	3.56E-18	6.57E-14
222	Phenol	4.33E-10	NA	NA	NA	NA	NA	NA	4.33E-10
223	Pyridine	3.63E-13	2.36E-14	2.26E-18	3.43E-19	8.98E-16	7.16E-20	6.12E-16	3.89E-13
224	Quinoline	1.30E-10	8.57E-12	3.18E-14	2.34E-15	3.21E-13	NA	2.19E-13	1.39E-10
225	Tetrachlorobenzene	3.93E-15	NA	NA	NA	NA	NA	NA	3.93E-15
226	Tetrachloroethene	3.80E-14	NA	NA	NA	NA	NA	NA	3.80E-14
227	Toluene	6.57E-12	2.67E-14	1.13E-16	9.63E-18	2.44E-15	1.08E-18	1.66E-15	6.61E-12
228	Trichlorobenzene	5.30E-14	NA	NA	NA	NA	NA	NA	5.30E-14
229	Trichloroethene	2.56E-07	2.91E-06	1.84E-14	3.12E-15	6.33E-10	8.13E-17	4.31E-10	3.17E-06
230	Unsym. dimethyl hydrazine	7.90E-13	5.91E-14	2.45E-18	3.95E-19	1.95E-15	5.97E-22	1.33E-15	8.52E-13
231	Vapona	4.48E-14	NA	NA	NA	NA	NA	NA	4.48E-14
232	Vinyl acetate	6.25E-13	NA	NA	NA	NA	NA	NA	6.25E-13
233	Vinyl chloride	1.81E-14	NA	NA	NA	NA	NA	NA	1.81E-14
234	Xylenes (total)								
235									
236	INORGANICS								
237	Arsenic	4.17E-08	1.87E-10	6.24E-11	3.31E-13	2.10E-11	9.84E-12	1.43E-11	4.20E-08
238	Cadmium	9.68E-10	1.15E-12	7.33E-14	8.82E-16	1.22E-13	NA	8.31E-14	9.69E-10
239	Chromium (III)	4.29E-10	NA	NA	NA	NA	NA	NA	4.29E-10
240	Chromium (VI)	1.51E-10	NA	NA	NA	NA	NA	NA	1.51E-10
241	Copper	3.24E-11	NA	NA	NA	NA	3.14E-14	NA	3.24E-11
242	Iron	7.70E-06	NA	NA	NA	NA	NA	NA	7.70E-06
243	Mercury	3.73E-09	2.54E-11	6.82E-13	1.09E-11	2.63E-12	NA	1.79E-12	3.77E-09
244	Selenium	4.74E-09	NA	NA	NA	NA	NA	NA	4.74E-09
245	Silver	4.33E-10	NA	NA	NA	NA	NA	NA	4.33E-10
246	Zinc	3.10E-10	NA	NA	NA	NA	2.29E-14	NA	3.10E-10
247									
248	Total (Hazard Index)	1.40E-05	2.07E-05	6.74E-11	1.14E-11	2.60E-09	9.90E-12	1.77E-09	3.47E-05

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

155 B	C	Z	AA	AB
156		TABLE 37		
157		INFANT HAZARD INDEX		
158				
159				
160				
161 RES-A				
162 BASE CASE				
163				
164				
165				
166 ORGANICS				
167	Acetone	1.03E-14	3.24E-15	1.35E-14
168	Acetonitrile	1.69E-09	1.44E-09	3.13E-09
169	Acrylonitrile	1.64E-09	8.22E-11	1.72E-09
170	Aldrin	1.03E-13	2.91E-12	3.01E-12
171	Aniline	1.22E-10	1.37E-09	1.49E-09
172	Atrazine	1.15E-12	3.05E-12	4.20E-12
173	Benzaldehyde	4.33E-12	1.15E-11	1.59E-11
174	Benzene	1.67E-13	6.29E-15	1.73E-13
175	Benzofuran	4.21E-10	1.09E-09	1.52E-09
176	Benzoic Acid	5.30E-14	1.39E-13	1.92E-13
177	Benzonitrile	5.78E-10	1.53E-09	2.11E-09
178	Benzothiazole	1.97E-12	5.14E-12	7.11E-12
179	Biphenyl	1.59E-09	7.36E-13	1.59E-09
180	Bis(2-ethylhexyl)phthalate	2.28E-13	2.25E-12	2.48E-12
181	Carbazole	1.90E-12	4.89E-12	6.79E-12
182	Carbon Tetrachloride	8.72E-13	6.84E-13	1.56E-12
183	4-Chloroaniline	1.36E-13	3.55E-13	4.91E-13
184	Chlorobenzene	2.61E-13	1.13E-15	2.63E-13
185	4-Chlorobiphenyl	5.47E-14	1.39E-13	1.94E-13
186	4,4'-Chlorobiphenyl	2.89E-15	7.37E-15	1.03E-14
187	Chloroethane	1.81E-14	NE	1.81E-14
188	Chloroform	4.68E-12	4.06E-13	5.09E-12
189	Dibenzofuran	NE	NE	NE
190	Dichlorobenzenes (total)	1.36E-13	1.05E-15	1.37E-13
191	1,1-Dichloroethane	1.56E-13	2.70E-15	1.58E-13
192	1,2-Dichloroethane	1.19E-13	2.94E-12	3.06E-12
193	1,1-Dichloroethene	4.08E-13	1.61E-14	4.24E-13
194	1,2-Dichloroethene	8.89E-15	6.25E-15	1.51E-14
195	1,2-Dichloropropane	8.71E-15	6.22E-15	1.49E-14
196	Dieldrin	1.89E-13	6.15E-12	6.34E-12
197	Dimethyldisulfide	1.63E-12	2.84E-14	1.66E-12
198	Hexachlorobenzene	1.59E-10	9.22E-11	2.51E-10
199	Hydrazine	1.24E-06	2.16E-05	2.29E-05
200	Lindane	4.39E-14	1.93E-13	2.36E-13
201	Malathion	6.48E-15	8.45E-15	1.49E-14
202	Methyl chloride	6.15E-14	6.23E-15	6.78E-14
203	Methylene chloride	4.55E-13	1.13E-13	5.68E-13
204	Methyl ethyl ketone	9.07E-14	6.16E-14	1.52E-13
205	4-Methylphenol	7.26E-13	4.03E-13	1.13E-12
206	Monomethyl hydrazine	2.67E-06	1.30E-05	1.56E-05
207	Naphthalene	1.71E-14	5.66E-13	5.84E-13
208	Naphthalene carbonitrile	9.07E-11	2.99E-09	3.09E-09
209	n-Nitrosodimethylamine	1.88E-10	6.51E-09	6.70E-09
210	PAHs			
211	Acenaphthalene	3.51E-12	9.10E-12	1.26E-11
212	Acenaphthene	3.51E-12	8.98E-12	1.25E-11
213	Benzo(a)pyrene	1.41E-11	3.60E-11	5.01E-11
214	Chrysene	1.41E-12	3.59E-12	5.00E-12

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

155 B	C	Z	AA	AB
156		TABLE 37		
215	Dibenzo(a,h)anthracene	1.41E-11	3.61E-11	5.02E-11
216	Fluoranthene	1.06E-11	2.71E-11	3.76E-11
217	Fluorene	1.06E-12	2.71E-12	3.77E-12
218	Phenanthrene	5.48E-15	1.40E-14	1.95E-14
219	Pyrene	2.82E-11	7.21E-11	1.00E-10
220	Parathion	2.05E-12	4.47E-14	2.10E-12
221	Pentachlorobenzene	6.48E-11	3.80E-11	1.03E-10
222	Phenol	4.28E-14	4.09E-15	4.69E-14
223	Pyridine	2.84E-10	8.03E-11	3.64E-10
224	Quinoline	2.38E-13	6.35E-13	8.73E-13
225	Tetrachlorobenzene	8.50E-11	5.16E-11	1.37E-10
226	Tetrachloroethene	2.57E-15	1.55E-15	4.12E-15
227	Toluene	2.49E-14	2.05E-16	2.51E-14
228	Trichlorobenzene	4.30E-12	3.71E-13	4.67E-12
229	Trichloroethene	3.47E-14	2.24E-14	5.71E-14
230	Unsym. dimethyl hydrazine	1.68E-07	6.16E-06	6.32E-06
231	Vapona	5.17E-13	1.38E-12	1.90E-12
232	Vinyl acetate	2.93E-14	1.02E-16	2.94E-14
233	Vinyl chloride	4.09E-13	7.26E-14	4.82E-13
234	Xylenes (total)	1.18E-14	2.93E-19	1.18E-14
235				
236	INORGANICS			
237	Arsenic	2.73E-08	NE	2.73E-08
238	Cadmium	6.33E-10	NE	6.33E-10
239	Chromium (III)	2.81E-10	NE	2.81E-10
240	Chromium (VI)	9.88E-11	NE	9.88E-11
241	Copper	2.12E-11	NE	2.12E-11
242	Iron	5.04E-06	NE	5.04E-06
243	Mercury	2.44E-09	NE	2.44E-09
244	Selenium	3.10E-09	NE	3.10E-09
245	Silver	2.83E-10	NE	2.83E-10
246	Zinc	2.03E-10	NE	2.03E-10
247				
248	Total (Hazard Index)	9.16E-06	4.08E-05	4.99E-05

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	D
253	TABLE 38		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256			
257	RES-A		
258	BASE CASE		
259			
260	Adult		NA
261	Inhalation		
262			82.1200
263	Ingestion		82.1181
264	Vegetables		0.0000
265	Milk		0.0000
266	Beef		0.0000
267	Soil\Dust		0.0018
268	Fish		0.0001
269			
270	Dermal		0.0013
271			
272	Child		
273	Inhalation		0.5264
274			
275	Ingestion		12.1038
276	Vegetables		12.1026
277	Milk		0.0000
278	Beef		0.0000
279	Soil\Dust		0.0012
280	Fish		0.0000
281			
282	Dermal		0.0008
283			
284	Infant		
285	Inhalation		0.3445
286			
287	Breast Milk Ingestion		4.9031
288			
290	Total		100.0000

A	B	C	AS	AT
98			TABLE 39	
99			ADULT INHALATION CARCINOGENIC RISK	
100			(These numbers are for sensitivity	
101			analysis)	
102				
103	RES-A		INHALATION	
104	BASE CASE		ADULT	
105			CARC.	
106			RISK	
107				
108	ORGANICS			
109	Acrylonitrile		3.34E-14	
110	Aldrin		8.62E-18	
111	Aniline		1.05E-16	
112	Benzene		3.05E-18	
113	Bis(2-ethylhexyl)phthalate		3.15E-19	
114	Carbazole		3.67E-18	
115	Carbon Tetrachloride		6.93E-17	
116	Chloroform		3.67E-16	
117	1,4-Dichlorobenzene		1.60E-19	
118	1,1-Dichloroethane		NE	
119	1,2-Dichloroethane		8.55E-18	
120	1,1-Dichloroethene		1.93E-16	
121	1,2-Dichloropropane		4.05E-18	
122	Dieldrin		1.49E-17	
123	Hexachlorobenzene		3.94E-15	
124	Hydrazine		5.44E-11	
125	Lindane		5.62E-19	
126	Methyl chloride		7.87E-19	
127	Methylene chloride		1.06E-16	
128	4-Methylphenol		NE	
129	Monomethyl hydrazine		1.10E-12	
130	n-Nitrosodimethylamine		5.20E-14	
131	PAHs			
132	Benzo(a)pyrene		4.98E-14	
133	Chrysene		4.98E-15	
134	Dibenzo(a,h)anthracene		4.98E-14	
135	Parathion		NE	
136	Quinoline		1.10E-14	
137	Tetrachloroethene		5.68E-20	
138	Trichloroethene		2.02E-18	
139	Vapona		2.32E-18	
140	Vinyl chloride		3.10E-17	
141				
142	INORGANICS			
143	Arsenic		1.62E-12	
144	Cadmium		3.81E-15	
145	Chromium (VI)		3.99E-15	
146				
147	Total		5.73E-11	
148				
149				
150				

INHALATION EXPOSURE DURATION 2 YEARS

9.1.2 Sensitivity Case Emissions - Resident A

TABLE 1-A										
A	B	C	D	E	F	G	H	I	J	K
2	3	4	5	6	7	8	9	10	11	12
SENSITIVITY CASE	20-Jun-91 13:35:21 RES-A	ER	EMISSION RATE g/sec	AVG. ANN. AMBIENT CONC. ug/M3	TOTAL DEPOSITION RATE g/M2/yr	DRY DEPOSITION RATE g/M2/yr	CO AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	CO AVERAGE CALCULATED CONC IN SOIL .1M mg/Kg	CO MAXIMUM CALCULATED CONC mg/Kg
13	14	15	16	17	18	19	20	21	22	23
ORGANICS	Acetone	Acetonitrile	1.26E-10	4.42E-11	NA	NA	NA	NA	NA	4.94E-09
14	Acetonitrile	Acrylonitrile	1.14E-07	4.00E-08	3.52E-10	1.68E-10	2.44E-09	2.47E-09	4.87E-09	NA
15	Acrylonitrile	Aldrin	4.85E-08	1.70E-08	NA	NA	NA	NA	NA	NA
16	Aldrin	Aniline	1.77E-13	6.21E-14	5.47E-16	2.60E-16	3.78E-15	3.84E-15	7.57E-15	7.68E-15
17	Aniline	Atrazine	6.41E-09	2.25E-09	1.98E-11	9.42E-12	1.37E-10	1.39E-10	2.74E-10	2.78E-10
18	Atrazine	Benzaldehyde	3.96E-11	1.39E-11	1.22E-13	5.82E-14	8.46E-13	8.59E-13	1.69E-12	1.72E-12
19	Benzaldehyde	Benzene	2.92E-09	1.02E-09	9.02E-12	4.29E-12	6.24E-11	6.33E-11	1.25E-10	1.27E-10
20	Benzene	Benzofuran	3.67E-11	1.29E-11	NA	NA	NA	NA	NA	NA
21	Benzofuran	Benzoic Acid	1.42E-08	4.98E-09	4.39E-11	2.09E-11	3.04E-10	3.08E-10	6.07E-10	6.16E-10
22	Benzoic Acid	Benzonitrile	2.02E-09	5.02E-10	4.42E-12	2.10E-12	3.06E-11	3.10E-11	6.11E-11	6.20E-11
23	Benzonitrile	Benzothiazole	3.12E-08	1.10E-08	9.64E-11	4.59E-11	6.87E-10	6.77E-10	1.33E-09	1.35E-09
24	Benzothiazole	Biphenyl	1.33E-11	4.67E-12	4.11E-14	1.96E-14	2.84E-13	2.88E-13	5.69E-13	5.77E-13
25	Biphenyl	Bis(2-ethylhexyl)phthalate	1.43E-08	5.02E-09	NA	NA	NA	NA	NA	NA
26	Bis(2-ethylhexyl)phthalate	Carbazole	7.85E-12	2.76E-12	2.43E-14	1.15E-14	1.68E-13	1.70E-13	3.36E-13	3.40E-13
27	Carbazole	Carbon Tetrachloride	6.41E-11	2.25E-11	1.98E-13	9.42E-14	1.37E-12	1.39E-12	2.74E-12	2.78E-12
28	Carbon Tetrachloride	Chloroaniline	1.86E-10	6.53E-11	NA	NA	NA	NA	NA	NA
29	Chloroaniline	Chlorobenzene	3.67E-12	1.29E-12	1.13E-14	5.39E-15	7.84E-14	7.96E-14	1.57E-13	1.59E-13
30	Chlorobenzene	4-Chlorobiphenyl	8.82E-12	3.10E-12	NA	NA	NA	NA	NA	NA
31	4-Chlorobiphenyl	4,4'-Chlorobiphenyl	9.04E-12	3.17E-12	2.79E-14	1.33E-14	1.93E-13	1.96E-13	3.86E-13	3.92E-13
32	4,4'-Chlorobiphenyl	Chloroethane	4.55E-13	1.60E-13	1.41E-15	6.69E-16	9.73E-15	9.87E-15	1.95E-14	1.97E-14
33	Chloroethane	Chloroform	3.24E-10	1.14E-10	1.00E-12	4.76E-13	6.93E-12	7.03E-12	1.39E-11	1.41E-11
34	Chloroform	Dibenzofuran	1.58E-09	5.55E-10	NA	NA	NA	NA	NA	NA
35	Dibenzofuran	Dichlorobenzenes (total)	2.85E-10	1.00E-10	8.81E-13	4.19E-13	6.09E-12	6.18E-12	1.22E-11	1.24E-11
36	Dichlorobenzenes (total)	1,4-Dichlorobenzene	3.67E-11	1.29E-11	NA	NA	NA	NA	NA	NA
37	1,4-Dichlorobenzene	1,1-Dichloroethane	2.32E-12	8.14E-13	NA	NA	NA	NA	NA	NA
38	1,1-Dichloroethane	1,2-Dichloroethane	1.05E-10	3.69E-11	NA	NA	NA	NA	NA	NA
39	1,2-Dichloroethane	1,1-Dichloroethene	3.28E-11	1.13E-11	1.01E-13	4.82E-14	7.01E-13	7.11E-13	1.40E-12	1.42E-12
40	1,1-Dichloroethene	1,2-Dichloroethene	5.62E-11	1.97E-11	NA	NA	NA	NA	NA	NA
41	1,2-Dichloroethene	1,2-Dichloropropane	4.86E-11	1.71E-11	NA	NA	NA	NA	NA	NA
42	1,2-Dichloropropane	Dieldrin	2.08E-11	7.30E-12	NA	NA	NA	NA	NA	NA
43	Dieldrin	Dimethyldisulfide	3.25E-13	1.14E-13	1.00E-15	4.78E-16	6.95E-1			

A	B	C	D	E	F	G	H	I	J	K
2			TABLE 1-A							
61	Chrysene		2.85E-10	1.00E-10	8.81E-13	4.19E-13	6.09E-12	6.18E-12	1.22E-11	1.24E-11
62	Dibenzo(a,h)anthracene		2.85E-09	1.00E-09	8.81E-12	4.19E-12	6.09E-11	6.18E-11	1.22E-10	1.24E-10
63	Fluoranthene		2.85E-09	1.00E-09	8.81E-12	4.19E-12	6.09E-11	6.18E-11	1.22E-10	1.24E-10
64	Fluorene		2.85E-10	1.00E-10	8.81E-13	4.19E-13	6.09E-12	6.18E-12	1.22E-11	1.24E-11
65	Phenanthrene		1.11E-12	3.90E-13	3.43E-15	1.63E-15	2.37E-14	2.41E-14	4.75E-14	4.81E-14
66	Pyrene		5.70E-09	2.00E-09	1.76E-11	8.38E-12	1.22E-10	1.24E-10	2.44E-10	2.47E-10
67	Parathion		7.06E-13	2.48E-13	2.18E-15	1.04E-15	1.51E-14	1.53E-14	3.02E-14	3.06E-14
68	Pentachlorobenzene		3.50E-10	1.23E-10	1.08E-12	5.14E-13	7.48E-12	7.59E-12	1.50E-11	1.52E-11
69	Phenol		5.60E-12	1.97E-12	1.73E-14	8.23E-15	1.20E-13	1.21E-13	2.39E-13	2.43E-13
70	Pyridine		3.12E-08	1.10E-08	NA	NA	NA	NA	NA	NA
71	Quinoline		3.21E-10	1.13E-10	9.92E-13	4.72E-13	6.86E-12	6.96E-12	1.37E-11	1.39E-11
72	Tetrachlorobenzene		1.72E-10	6.04E-11	5.31E-13	2.53E-13	3.68E-12	3.73E-12	7.35E-12	7.46E-12
73	Tetrachloroethene		6.01E-12	2.11E-12	NA	NA	NA	NA	NA	NA
74	Toluene		9.58E-11	3.36E-11	NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		8.71E-11	3.06E-11	2.69E-13	1.28E-13	1.86E-12	1.89E-12	3.72E-12	3.78E-12
76	Trichloroethene		6.41E-11	2.25E-11	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		1.39E-06	4.84E-07	4.26E-09	2.03E-09	2.95E-08	2.99E-08	5.90E-08	5.98E-08
78	Vapona		2.79E-12	9.79E-13	8.62E-15	4.10E-15	5.96E-14	6.05E-14	1.19E-13	1.21E-13
79	Vinyl acetate		3.96E-11	1.39E-11	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		3.67E-11	1.29E-11	NA	NA	NA	NA	NA	NA
81	Xylenes (total)		6.84E-12	2.40E-12	NA	NA	NA	NA	NA	NA
82										
83	INORGANICS									
84	Arsenic		4.24E-08	1.49E-08	1.31E-10	6.23E-11	9.06E-10	9.19E-10	1.81E-09	1.84E-09
85	Cadmium		3.10E-10	1.09E-10	9.58E-13	4.56E-13	6.63E-12	6.72E-12	1.33E-11	1.34E-11
86	Chromium (III)		1.26E-09	4.41E-10	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		4.42E-11	1.55E-11	NA	NA	NA	NA	NA	NA
88	Copper		3.17E-09	1.11E-09	NA	NA	NA	NA	NA	NA
89	Iron		9.68E-05	3.40E-05	NA	NA	NA	NA	NA	NA
90	Lead		1.63E-09	5.72E-10	5.04E-12	2.40E-12	3.48E-11	3.53E-11	6.97E-11	7.07E-11
91	Mercury		2.02E-09	7.09E-10	6.24E-12	2.97E-12	4.32E-11	4.38E-11	8.64E-11	8.76E-11
92	Selenium		5.21E-09	1.83E-09	NA	NA	NA	NA	NA	NA
93	Silver		3.24E-11	1.14E-11	NA	NA	NA	NA	NA	NA
94	Zinc		1.43E-08	5.02E-09	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 YRS ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
3.51E-01 INHALATION DFI
Deposition Factor DF
1.47E-03 DRY DDF
3.09E-03 DRY/WET TDF

CO =

D*AT*1000

SD*BD

AC = ER * DFI
D = ER * X DF

ROCKY MTN ARSENAL - RESIDENT SCENARIO A - HYDRAZINE WASTESTREAM 20-Jun-91

A	B	C	M	N	O	P	Q	R
2	TABLE 1-B							
3	CATTLE FEED							
4								
5	SENSITIVITY CASE							
6								
7								
8	20-Jun-91							
9	13:35:21							
10	RES-A							
11								
12	ORGANICS							
13	Acetone	NA	NA	NA	NA	NA	NA	NA
14	Acetonitrile	3.42E-10	5.76E-11	2.37E-09	2.40E-09	4.73E-09	4.80E-09	4.80E-09
15	Acrylonitrile	NA	NA	NA	NA	NA	NA	NA
16	Aldrin	5.31E-16	8.94E-17	3.67E-15	3.73E-15	7.35E-15	7.45E-15	7.45E-15
17	Aniline	1.92E-11	3.24E-12	1.33E-10	1.35E-10	2.66E-10	2.70E-10	2.70E-10
18	Atrazine	1.19E-13	2.00E-14	8.22E-13	8.34E-13	1.64E-12	1.67E-12	1.67E-12
19	Benzaldehyde	8.76E-12	1.47E-12	6.06E-11	6.15E-11	1.21E-10	1.23E-10	1.23E-10
20	Benzene	NA	NA	NA	NA	NA	NA	NA
21	Benzofuran	4.26E-11	7.17E-12	2.95E-10	2.99E-10	5.89E-10	5.98E-10	5.98E-10
22	Benzoic Acid	4.29E-12	7.22E-13	2.97E-11	3.01E-11	5.94E-11	6.02E-11	6.02E-11
23	Benzonitrile	9.36E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09	1.31E-09
24	Benzothiazole	3.99E-14	6.72E-15	2.76E-13	2.80E-13	5.52E-13	5.60E-13	5.60E-13
25	Biphenyl	NA	NA	NA	NA	NA	NA	NA
26	Bis(2-ethylhexyl)phthalate	2.36E-14	3.96E-15	1.63E-13	1.65E-13	3.26E-13	3.31E-13	3.31E-13
27	Carbazole	1.92E-13	3.24E-14	1.33E-12	1.35E-12	2.66E-12	2.70E-12	2.70E-12
28	Carbon Tetrachloride	NA	NA	NA	NA	NA	NA	NA
29	4-Chloroaniline	1.10E-14	1.85E-15	7.62E-14	7.73E-14	1.52E-13	1.55E-13	1.55E-13
30	Chlorobenzene	NA	NA	NA	NA	NA	NA	NA
31	4-Chlorobiphenyl	2.71E-14	4.57E-15	1.88E-13	1.90E-13	3.75E-13	3.81E-13	3.81E-13
32	4,4'-Chlorobiphenyl	1.36E-15	2.30E-16	9.44E-15	9.58E-15	1.89E-14	1.92E-14	1.92E-14
33	Chloroethane	9.72E-13	1.64E-13	6.72E-12	6.82E-12	1.34E-11	1.36E-11	1.36E-11
34	Chloroform	NA	NA	NA	NA	NA	NA	NA
35	Dibenzofuran	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11	1.20E-11
36	Dichlorobenzenes (total)	NA	NA	NA	NA	NA	NA	NA
37	1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA
38	1,1-Dichloroethane	NA	NA	NA	NA	NA	NA	NA
39	1,2-Dichloroethane	9.84E-14	1.66E-14	6.81E-13	6.91E-13	1.36E-12	1.38E-12	1.38E-12
40	1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA
41	1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA
42	1,2-Dichloropropane	NA	NA	NA	NA	NA	NA	NA
43	Dieldrin	9.75E-16	1.64E-16	6.74E-15	6.84E-15	1.35E-14	1.37E-14	1.37E-14
44	Dimethyldisulfide	NA	NA	NA	NA	NA	NA	NA
45	Hexachlorobenzene	2.58E-12	4.34E-13	1.78E-11	1.81E-11	3.57E-11	3.62E-11	3.62E-11
46	Hydrazine	3.33E-09	5.61E-10	2.30E-08	2.34E-08	4.61E-08	4.67E-08	4.67E-08
47	Lindane	4.53E-16	7.63E-17	3.13E-15	3.18E-15	6.27E-15	6.36E-15	6.36E-15
48	Malathion	1.34E-15	2.25E-16	9.26E-15	9.39E-15	1.85E-14	1.88E-14	1.88E-14
49	Methyl chloride	NA	NA	NA	NA	NA	NA	NA
50	Methylene chloride	NA	NA	NA	NA	NA	NA	NA
51	Methyl ethyl ketone	1.65E-13	2.78E-14	1.14E-12	1.16E-12	2.29E-12	2.32E-12	2.32E-12
52	4-Methylphenol	1.50E-13	2.53E-14	1.04E-12	1.05E-12	2.08E-12	2.11E-12	2.11E-12
53	Monomethyl hydrazine	1.05E-09	1.77E-10	7.26E-09	7.37E-09	1.45E-08	1.47E-08	1.47E-08
54	Naphthalene	1.77E-14	2.98E-15	1.22E-13	1.24E-13	2.45E-13	2.48E-13	2.48E-13
55	Naphthalene carbonitrile	9.36E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09	1.31E-09
56	n-Nitrosodimethylamine	1.07E-12	1.80E-13	7.39E-12	7.49E-12	1.48E-11	1.50E-11	1.50E-11
57	PAHs							
58	Acenaphthalene	4.26E-12	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11	5.98E-11
59	Acenaphthene	4.26E-12	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11	5.98E-11
60	Benzo(a)pyrene	8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10	1.20E-10

A	B	C	M	N	O	P	Q	R
			TABLE 1-B					
61	Chrysene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Fluorene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		1.05E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		NA	NA	NA	NA	NA	NA
71	Quinoline		9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		NA	NA	NA	NA	NA	NA
74	Toluene		NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		NA	NA	NA	NA	NA	NA
80	Vinyl chloride		NA	NA	NA	NA	NA	NA
81	Xylenes (total)		NA	NA	NA	NA	NA	NA
82								
83	INORGANICS							
84	Arsenic		1.27E-10	2.14E-11	8.80E-10	8.93E-10	1.76E-09	1.79E-09
85	Cadmium		9.30E-13	1.57E-13	6.43E-12	6.53E-12	1.29E-11	1.31E-11
86	Chromium (III)		NA	NA	NA	NA	NA	NA
87	Chromium (VI)		NA	NA	NA	NA	NA	NA
88	Copper		NA	NA	NA	NA	NA	NA
89	Iron		NA	NA	NA	NA	NA	NA
90	Lead		4.89E-12	8.23E-13	3.38E-11	3.43E-11	6.77E-11	6.86E-11
91	Mercury		6.06E-12	1.02E-12	4.19E-11	4.25E-11	8.38E-11	8.51E-11
92	Selenium		NA	NA	NA	NA	NA	NA
93	Silver		NA	NA	NA	NA	NA	NA
94	Zinc		NA	NA	NA	NA	NA	NA

2.0 yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/WET TDF
CO = D*AT*1000
SD*BD
D = ER * x DF

A	B	C	T	U	V	W	X	Y	Z	AA
2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56
57	58	59	60							
SENSITIVITY CASE										
TABLE 2										
ADULT TOTAL EXPOSURE - AVERAGE										
18-Jun-91	16:16:24	RES-A	INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
			EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	CONSUMPTION	EXPOSURE	(mg/Kg/day)
			(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)
13	Acetone		1.26E-14	NA	NA	NA	NA	NA	NA	1.26E-14
14	Acetonitrile		1.14E-11	1.18E-11	2.37E-18	9.30E-19	6.96E-15	7.76E-21	2.56E-15	2.33E-11
15	Acrylonitrile		4.86E-12	NA	NA	NA	NA	NA	NA	4.86E-12
16	Aldrin		1.78E-17	4.07E-18	4.78E-20	7.19E-21	1.08E-20	2.81E-27	3.98E-21	2.19E-17
17	Aniline		6.43E-13	7.17E-14	4.43E-19	1.73E-19	3.91E-16	2.33E-19	1.44E-16	7.15E-13
18	Atrazine		3.97E-15	1.15E-16	1.54E-20	6.01E-21	2.42E-18	0.00E+00	8.90E-19	4.09E-15
19	Benzaldehyde		2.93E-13	1.60E-14	3.54E-19	1.38E-19	1.78E-16	2.51E-20	6.56E-17	3.09E-13
20	Benzene		3.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
21	Benzofuran		1.42E-12	4.15E-14	5.49E-18	2.13E-18	8.67E-16	5.53E-19	3.19E-16	1.47E-12
22	Benzoic Acid		1.43E-13	5.09E-15	2.53E-19	9.69E-20	8.73E-17	2.20E-20	3.21E-17	1.49E-13
23	Benzonitrile		3.13E-12	1.56E-13	4.08E-18	1.60E-18	1.91E-15	2.99E-19	7.01E-16	3.29E-12
24	Benzothiazole		1.33E-15	4.11E-17	2.70E-21	1.05E-21	8.12E-19	2.51E-24	2.99E-19	1.38E-15
25	Biphenyl		1.43E-12	NA	NA	NA	NA	NA	NA	1.43E-12
26	Bis(2-ethylhexyl)phthalate		7.87E-16	1.37E-16	4.02E-17	4.79E-18	4.79E-19	3.25E-24	1.76E-19	9.70E-16
27	Carbazole		6.43E-15	1.16E-16	4.58E-20	1.76E-20	3.91E-18	3.51E-21	1.44E-18	6.55E-15
28	Carbon Tetrachloride		1.87E-14	NA	NA	NA	NA	NA	NA	1.87E-14
29	4-Chloroaniline		3.68E-16	1.25E-17	6.24E-22	2.44E-22	2.24E-19	9.45E-22	8.24E-20	3.81E-16
30	Chlorobenzene		8.85E-16	NA	NA	NA	NA	NA	NA	8.85E-16
31	4-Chlorobiphenyl		9.07E-16	7.25E-18	3.65E-20	1.24E-20	5.52E-19	3.39E-22	2.03E-19	9.15E-16
32	4,4'-Chlorobiphenyl		4.56E-17	2.81E-19	4.50E-21	1.32E-21	2.78E-20	5.71E-24	1.02E-20	4.60E-17
33	Chloroethane		3.25E-14	1.79E-15	3.96E-20	1.59E-20	1.98E-17	1.91E-23	7.28E-18	3.43E-14
34	Chloroform		1.58E-13	NA	NA	NA	NA	NA	NA	1.58E-13
35	Dibenzofuran		2.86E-14	3.23E-16	4.77E-19	1.77E-19	1.74E-17	2.19E-20	6.40E-18	2.89E-14
36	Dichlorobenzenes (total)		3.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
37	1,4-Dichlorobenzene		2.33E-16	NA	NA	NA	NA	NA	NA	2.33E-16
38	1,1-Dichloroethane		1.05E-14	NA	NA	NA	NA	NA	NA	1.05E-14
39	1,2-Dichloroethane		3.29E-15	5.64E-16	3.97E-21	1.56E-21	2.00E-18	5.73E-23	7.37E-19	3.86E-15
40	1,1-Dichloroethene		5.64E-15	NA	NA	NA	NA	NA	NA	5.64E-15
41	1,2-Dichloroethene		4.87E-15	NA	NA	NA	NA	NA	NA	4.87E-15
42	1,2-Dichloropropane		2.09E-15	NA	NA	NA	NA	NA	NA	2.09E-15
43	Dieldrin		3.26E-17	5.01E-17	8.55E-21	2.01E-21	1.98E-20	1.08E-24	7.30E-21	8.27E-17
44	Dimethyldisulfide		8.96E-15	NA	NA	NA	NA	NA	NA	8.96E-15
45	Hexachlorobenzene		8.61E-14	1.32E-15	7.27E-18	2.19E-18	5.25E-17	4.30E-19	1.93E-17	8.75E-14
46	Hydrazine		1.11E-10	3.40E-09	1.63E-18	6.40E-19	6.78E-14	3.52E-20	2.49E-14	3.51E-09
47	Lindane		1.51E-17	3.17E-19	1.09E-22	4.19E-23	9.22E-21	4.73E-26	3.39E-21	1.55E-17
48	Malathion		4.47E-17	5.34E-19	2.14E-22	8.30E-23	2.72E-20	0.00E+00	1.00E-20	4.53E-17
49	Methyl chloride		4.37E-15	NA	NA	NA	NA	NA	NA	4.37E-15
50	Methylene chloride		2.64E-13	NA	NA	NA	NA	NA	NA	2.64E-13
51	Methyl ethyl ketone		5.53E-15	2.74E-15	2.05E-21	8.03E-22	3.36E-18	0.00E+00	1.24E-18	8.27E-15
52	4-Methylphenol		5.01E-15	3.81E-16	9.47E-21	3.70E-21	3.05E-18	2.71E-23	1.12E-18	5.40E-15
53	Monomethyl hydrazine		3.51E-11	7.37E-10	5.14E-19	2.02E-19	2.14E-14	1.12E-20	7.86E-15	7.72E-10
54	Naphthalene		5.92E-16	1.47E-17	4.47E-21	1.72E-21	3.60E-19	1.48E-19	1.33E-19	6.07E-16
55	Naphthalene carbonitrile		3.13E-12	7.75E-14	2.37E-17	9.09E-18	1.91E-15	3.42E-18	7.01E-16	3.21E-12
56	n-Nitrosodimethylamine		3.57E-14	4.58E-13	5.33E-21	2.09E-21	2.17E-17	0.00E+00	8.00E-18	4.93E-13
57	PAHs									
58	Acenaphthalene		1.42E-13	3.77E-15	2.26E-18	8.41E-19	8.67E-17	1.05E-19	3.19E-17	1.46E-13
59	Acenaphthene		1.42E-13	1.80E-15	1.93E-18	7.25E-19	8.67E-17	4.07E-20	3.19E-17	1.44E-13
60	Benzo(a)pyrene		2.86E-13	4.34E-16	1.10E-16	2.38E-17	1.74E-16	1.40E-19	6.40E-17	2.87E-13

TABLE 2										
A	B	C	T	U	V	W	X	Y	Z	AA
61	Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Phenanthrene Pyrene Parathion Pentachlorobenzene Phenol Pyridine Quinoline Tetrachlorobenzene Tetrachloroethene Toluene Trichlorobenzene Trichloroethene Unsym. dimethyl hydrazine Vapona Vinyl acetate Vinyl chloride Xylenes (total)		2.86E-14	2.06E-16	3.85E-18	1.06E-18	1.74E-17	3.55E-19	6.40E-18	2.88E-14
62			2.86E-13	6.17E-16	1.28E-16	2.67E-17	1.74E-16	7.95E-17	6.40E-17	2.87E-13
63			2.86E-13	3.76E-15	1.72E-17	5.52E-18	1.74E-16	NA	6.40E-17	2.90E-13
64			2.86E-14	4.57E-16	6.32E-19	2.30E-19	1.74E-17	2.92E-20	6.40E-18	2.91E-14
65			1.11E-16	1.32E-18	3.05E-21	1.09E-21	6.78E-20	1.01E-19	2.49E-20	1.13E-16
66			5.72E-13	7.06E-15	3.27E-17	1.06E-17	3.48E-16	1.60E-18	1.28E-16	5.79E-13
67			7.08E-17	9.39E-19	8.54E-22	3.23E-22	4.31E-20	3.17E-25	1.59E-20	7.18E-17
68			3.51E-14	1.01E-15	1.77E-18	5.83E-19	2.14E-17	NA	7.86E-18	3.61E-14
69			5.62E-16	9.61E-17	6.65E-22	2.60E-22	3.42E-19	NA	1.26E-19	6.58E-16
70			3.13E-12	NA	NA	NA	NA	NA	NA	3.13E-12
71		3.22E-14	1.82E-15	6.63E-20	2.59E-20	1.96E-17	6.35E-21	7.21E-18	3.40E-14	
72		1.72E-14	1.14E-15	3.77E-19	1.38E-19	1.05E-17	NA	3.86E-18	1.84E-14	
73		6.03E-16	NA	NA	NA	NA	NA	NA	6.03E-16	
74		9.61E-15	NA	NA	NA	NA	NA	NA	9.61E-15	
75		8.73E-15	6.93E-17	1.26E-19	4.72E-20	5.32E-18	9.59E-21	1.96E-18	8.81E-15	
76		6.43E-15	NA	NA	NA	NA	NA	NA	6.43E-15	
77		1.38E-10	1.89E-09	3.84E-18	1.51E-18	8.43E-14	4.39E-20	3.10E-14	2.03E-09	
78		2.80E-16	1.68E-17	3.13E-22	1.22E-22	1.70E-19	2.12E-25	6.27E-20	2.97E-16	
79		3.97E-15	NA	NA	NA	NA	NA	NA	3.97E-15	
80		3.64E-15	NA	NA	NA	NA	NA	NA	3.64E-15	
81		6.86E-16	NA	NA	NA	NA	NA	NA	6.86E-16	
82										
83	INORGANICS									
84	Arsenic		4.25E-12	3.65E-15	2.28E-15	2.99E-17	2.59E-15	4.89E-15	9.52E-17	4.27E-12
85	Cadmium		3.11E-14	8.48E-17	5.94E-18	2.60E-19	1.89E-17	NA	6.96E-19	3.12E-14
86	Chromium (III)		1.26E-13	NA	NA	NA	NA	NA	NA	1.26E-13
87	Chromium (VI)		4.43E-15	NA	NA	NA	NA	NA	NA	4.43E-15
88	Copper		3.18E-13	NA	NA	NA	NA	1.17E-15	NA	3.19E-13
89	Iron		9.71E-09	NA	NA	NA	NA	NA	NA	9.71E-09
90	Lead		1.63E-13	NA	NA	NA	NA	NA	NA	1.63E-13
91	Mercury		2.03E-13	7.21E-16	1.53E-17	1.14E-15	1.23E-16	NA	4.54E-18	2.05E-13
92	Selenium		5.22E-13	NA	NA	NA	NA	NA	NA	5.22E-13
93	Silver		3.25E-15	NA	NA	NA	NA	NA	NA	3.25E-15
94	Zinc		1.43E-12	NA	NA	NA	NA	2.59E-15	NA	1.44E-12

br 20 M3/day D*AT*1000
 bw 70 Kg -----
 ef 365 days/yr SD*BD
 cf 365000 (1000 ug/mg)*(365 day/yr) AC = ER * DF1
 Inhalation dose = Cair*br*ef/bw/cf D = ER * X DF

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
3			ADULT TOTAL EXPOSURE - MAXIMUM							
4		SENSITIVITY CASE								
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RES-A

ORGANICS

INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)
1.26E-14	NA	NA	NA	NA	NA	NA	1.26E-14
1.14E-11	1.23E-11	2.42E-18	9.45E-19	7.06E-15	7.76E-21	2.60E-15	2.37E-11
4.86E-12	NA	NA	NA	NA	NA	NA	4.86E-12
1.78E-17	4.59E-18	1.45E-18	1.64E-19	1.10E-20	2.81E-27	4.03E-21	2.40E-17
6.43E-13	8.93E-14	4.65E-19	1.78E-19	3.97E-16	2.33E-19	1.46E-16	7.33E-13
3.97E-15	2.19E-16	2.16E-20	6.77E-21	2.45E-18	0.00E+00	9.02E-19	4.19E-15
2.93E-13	2.39E-14	3.87E-19	1.44E-19	1.81E-16	2.51E-20	6.65E-17	3.17E-13
3.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
1.42E-12	7.89E-14	7.66E-18	2.40E-18	8.80E-16	5.53E-19	3.24E-16	1.50E-12
1.43E-13	8.88E-15	2.90E-19	1.04E-19	8.86E-17	2.20E-20	3.26E-17	1.52E-13
3.13E-12	2.39E-13	4.50E-18	1.66E-18	1.93E-15	2.99E-19	7.11E-16	3.37E-12
1.33E-15	7.62E-17	3.16E-21	1.12E-21	8.24E-19	2.51E-24	3.03E-19	1.41E-15
1.43E-12	NA	NA	NA	NA	NA	NA	1.43E-12
7.87E-16	1.59E-16	1.37E-15	1.54E-16	4.86E-19	3.25E-24	1.79E-19	2.47E-15
6.43E-15	2.84E-16	8.58E-20	2.23E-20	3.97E-18	3.31E-21	1.46E-18	6.72E-15
1.87E-14	NA	NA	NA	NA	NA	NA	1.87E-14
3.68E-16	2.22E-17	7.12E-22	2.57E-22	2.27E-19	9.45E-22	8.36E-20	3.91E-16
8.85E-16	NA	NA	NA	NA	NA	NA	8.85E-16
9.07E-17	3.08E-17	2.63E-19	3.80E-20	5.60E-19	3.39E-22	2.06E-19	9.38E-16
4.56E-17	1.46E-18	5.91E-20	7.45E-21	2.82E-20	5.71E-24	1.04E-20	4.72E-17
3.25E-14	2.66E-15	4.34E-20	1.61E-20	2.01E-17	1.91E-23	7.38E-18	3.52E-14
1.58E-13	NA	NA	NA	NA	NA	NA	1.58E-13
2.86E-14	1.07E-15	1.67E-18	3.13E-19	1.77E-17	2.19E-20	6.49E-18	2.97E-14
3.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
2.33E-16	NA	NA	NA	NA	NA	NA	2.33E-16
1.05E-14	NA	NA	NA	NA	NA	NA	1.05E-14
3.29E-15	6.57E-16	4.34E-21	1.61E-21	2.03E-18	5.73E-23	7.47E-19	3.95E-15
5.64E-15	NA	NA	NA	NA	NA	NA	5.64E-15
4.87E-15	NA	NA	NA	NA	NA	NA	4.87E-15
2.09E-15	NA	NA	NA	NA	NA	NA	2.09E-15
3.26E-17	5.17E-17	1.71E-19	2.02E-20	2.01E-20	1.08E-24	7.41E-21	8.45E-17
8.96E-15	NA	NA	NA	NA	NA	NA	8.96E-15
8.61E-14	3.56E-15	8.73E-17	1.12E-17	5.32E-17	4.30E-19	1.96E-17	8.99E-14
1.11E-10	3.45E-09	1.65E-18	6.49E-19	6.88E-14	3.52E-20	2.53E-14	3.57E-09
1.51E-17	7.13E-19	2.05E-22	5.32E-23	9.36E-21	4.73E-26	3.44E-21	1.59E-17
4.47E-17	1.70E-18	3.26E-22	9.64E-23	2.76E-20	0.00E+00	1.02E-20	4.65E-17
4.37E-15	NA	NA	NA	NA	NA	NA	4.37E-15
2.64E-13	NA	NA	NA	NA	NA	NA	2.64E-13
5.53E-15	2.93E-15	2.11E-21	8.18E-22	3.41E-18	0.00E+00	1.26E-18	8.46E-15
5.01E-15	5.16E-16	1.10E-20	3.91E-21	3.10E-18	2.71E-23	1.14E-18	5.53E-15
3.51E-11	7.49E-10	5.22E-19	2.05E-19	2.17E-14	1.12E-20	7.98E-15	7.84E-10
5.92E-16	3.02E-17	8.70E-21	2.21E-21	3.66E-19	1.48E-19	1.34E-19	6.23E-16
3.13E-12	1.59E-13	4.60E-17	1.17E-17	1.93E-15	3.42E-18	7.11E-16	3.29E-12
3.57E-14	4.65E-13	5.43E-21	2.12E-21	2.21E-17	0.00E+00	8.11E-18	5.01E-13
1.42E-13	7.51E-15	7.55E-18	1.44E-18	8.80E-17	1.05E-19	3.24E-17	1.50E-13
1.42E-13	5.50E-15	5.68E-18	1.15E-18	8.80E-17	4.07E-20	3.24E-17	1.48E-13
2.86E-13	7.83E-15	2.47E-15	2.89E-16	1.77E-16	1.40E-19	6.49E-17	2.97E-13

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
61	Chrysene		2.86E-14	9.48E-16	5.93E-17	7.28E-18	1.77E-17	3.55E-19	6.49E-18	2.96E-14
62	Dibenzo(a,h)anthracene		2.86E-13	8.01E-15	2.97E-15	3.45E-16	1.77E-16	7.95E-17	6.49E-17	2.97E-13
63	Fluoranthene		2.86E-14	1.12E-14	1.67E-16	2.23E-17	1.77E-17	NA	6.49E-17	2.97E-13
64	Fluorene		2.86E-14	1.20E-15	2.80E-18	4.75E-19	1.77E-17	2.92E-20	6.49E-18	2.98E-14
65	Phenanthrene		1.11E-16	4.22E-18	1.61E-20	2.56E-21	6.88E-20	1.01E-19	2.53E-20	1.16E-16
66	Pyrene		5.72E-13	2.19E-14	3.05E-16	4.12E-17	3.53E-16	1.60E-18	1.30E-16	5.94E-13
67	Parathion		7.08E-17	2.78E-18	2.30E-21	4.89E-22	4.37E-20	3.17E-25	1.61E-20	7.36E-17
68	Pentachlorobenzene		3.51E-14	1.93E-15	1.51E-17	2.08E-18	2.17E-17	NA	7.98E-18	3.71E-14
69	Phenol		5.62E-16	1.12E-16	7.26E-22	2.70E-22	3.47E-19	NA	1.28E-19	6.74E-16
70	Pyridine		3.13E-12	NA	NA	NA	NA	NA	NA	3.13E-12
71	Quinoline		3.22E-14	2.68E-15	7.82E-20	2.75E-20	1.99E-17	6.35E-21	7.32E-18	3.49E-14
72	Tetrachlorobenzene		1.72E-14	1.60E-15	1.65E-18	2.82E-19	1.07E-17	NA	3.92E-18	1.89E-14
73	Tetrachloroethene		6.03E-16	NA	NA	NA	NA	NA	NA	6.03E-16
74	Toluene		9.61E-15	2.96E-16	3.90E-19	7.72E-20	5.40E-18	9.59E-21	1.98E-18	9.61E-15
75	Trichlorobenzene		8.73E-15	NA	NA	NA	NA	NA	NA	9.04E-15
76	Trichloroethene		6.43E-15	NA	NA	NA	NA	NA	NA	6.43E-15
77	Unsym. dimethyl hydrazine		1.38E-10	1.93E-09	3.90E-18	1.53E-18	8.55E-14	4.39E-20	3.14E-14	2.06E-09
78	Vapona		2.80E-16	2.43E-17	3.59E-22	1.27E-22	1.73E-19	2.12E-25	6.36E-20	3.04E-16
79	Vinyl acetate		3.97E-15	NA	NA	NA	NA	NA	NA	3.97E-15
80	Vinyl chloride		5.68E-15	NA	NA	NA	NA	NA	NA	3.68E-15
81	Xylenes (total)		6.86E-16	NA	NA	NA	NA	NA	NA	6.86E-16
82										
83	INORGANICS									
84	Arsenic		4.25E-12	1.14E-13	1.22E-14	1.50E-16	2.63E-15	4.89E-15	9.66E-17	4.39E-12
85	Cadmium		3.11E-14	8.90E-16	1.80E-17	5.03E-19	1.92E-17	NA	7.06E-19	3.20E-14
86	Chromium (III)		1.26E-13	NA	NA	NA	NA	NA	NA	1.26E-13
87	Chromium (VI)		4.43E-15	NA	NA	NA	NA	NA	NA	4.43E-15
88	Copper		3.18E-13	NA	NA	NA	NA	1.17E-15	NA	3.19E-13
89	Iron		9.71E-09	NA	NA	NA	NA	NA	NA	9.71E-09
90	Lead		1.63E-13	NA	NA	NA	NA	NA	NA	1.63E-13
91	Mercury		2.03E-13	5.97E-15	5.07E-17	1.87E-15	1.25E-16	NA	4.60E-18	2.11E-13
92	Selenium		5.22E-13	NA	NA	NA	NA	NA	NA	5.22E-13
93	Silver		3.25E-15	NA	NA	NA	NA	NA	NA	3.25E-15
94	Zinc		1.43E-12	NA	NA	NA	NA	2.59E-15	NA	1.44E-12
95										
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101										
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103										

br 20 M3/day
 bw 70 Kg
 ef 365 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
ORGANICS	Acetone	Acetonitrile	Acrylonitrile	Aldrin	Aniline	Atrazine	Benzaldehyde	Benzene	Benzofuran	Benzoic Acid	Benzonitrile	Benzothiazole	Biphenyl	Bis(2-ethylhexyl)phthalate	Carbazole	Carbon Tetrachloride	4-Chloroaniline	Chlorobenzene	4-Chlorobiphenyl	4,4'-Chlorobiphenyl	Chloroethane	Chloroform	Dibenzofuran	Dichlorobenzenes (total)	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene	1,2-Dichloropropane	Dieldrin	Dimethyldisulfide	Hexachlorobenzene	Hydrazine	Lindane	Malathion	Methyl chloride	Methylene chloride	Methyl ethyl ketone	4-Methylphenol	Monomethyl hydrazine	Naphthalene	Naphthalene carbonitrile	n-Nitrosodimethylamine	PAHs	Acenaphthalene	Acenaphthene	Benzo(a)pyrene
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9.87E-15	5.96E-13	1.25E-14	1.13E-14	7.93E-11	1.34E-14	7.07E-12	8.06E-14	3.22E-13	3.22E-13	6.45E-13		
2.85E-14	2.58E-11	1.10E-11	4.01E-17	1.44E-12	8.97E-15	6.61E-13	8.31E-15	3.22E-12	3.24E-12	3.24E-12	1.78E-15	1.45E-14	4.21E-14	8.31E-15	3.22E-12	3.24E-12	3.24E-12	2.00E-15	2.05E-15	7.34E-14	3.58E-13	6.45E-14	8.31E-15	5.25E-16	2.38E-14	7.43E-15	1.27E-14	1.10E-14	4.71E-15	7.36E-17	2.02E-14	1.95E-13	2.51E-10	3.42E-17	1.01E-16	9												

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
61	Chrysene		6.45E-14	3.19E-16	2.23E-17	2.63E-18	1.57E-16	8.01E-19	5.35E-17	6.51E-14
62	Dibenzo(a,h)anthracene		6.45E-13	1.01E-15	7.38E-16	6.66E-17	1.57E-15	1.79E-16	5.35E-16	6.49E-13
63	Fluoranthene		6.45E-13	5.77E-15	9.94E-17	1.38E-17	1.57E-15	NA	5.35E-16	6.53E-13
64	Fluorene		6.45E-14	7.08E-16	3.65E-18	5.74E-19	1.57E-16	6.60E-20	5.35E-17	6.55E-14
65	Phenanthrene		2.51E-16	2.06E-18	1.76E-20	2.71E-21	6.12E-19	2.27E-19	2.09E-19	2.54E-16
66	Pyrene		1.29E-12	1.08E-14	1.89E-16	2.64E-17	3.14E-15	3.62E-18	1.07E-15	1.31E-12
67	Parathion		1.60E-16	1.51E-18	4.93E-21	8.06E-22	3.89E-19	7.17E-25	1.33E-19	1.62E-16
68	Pentachlorobenzene		7.93E-14	1.53E-15	1.02E-17	1.45E-18	1.93E-16	NA	6.58E-17	8.11E-14
69	Phenol		1.27E-15	1.59E-16	3.84E-21	6.50E-22	3.09E-18	NA	1.05E-18	1.43E-15
70	Pyridine		7.07E-12	NA	NA	NA	NA	NA	NA	7.07E-12
71	Quinoline		7.27E-14	3.13E-15	3.83E-19	6.47E-20	1.77E-16	1.43E-20	6.03E-17	7.61E-14
72	Tetrachlorobenzene		3.89E-14	1.72E-15	2.18E-18	3.43E-19	9.49E-17	NA	3.23E-17	4.08E-14
73	Tetrachloroethene		1.36E-15	NA	NA	NA	NA	NA	NA	1.36E-15
74	Toluene		2.17E-14	NA	NA	NA	NA	NA	NA	2.17E-14
75	Trichlorobenzene		1.97E-14	1.14E-16	7.27E-19	1.18E-19	4.80E-17	2.17E-20	1.64E-17	1.99E-14
76	Trichloroethene		1.43E-14	NA	NA	NA	NA	NA	1.45E-14	1.45E-14
77	Unsym. dimethyl hydrazine		3.13E-10	3.50E-09	2.22E-17	3.75E-18	7.61E-13	9.92E-20	2.59E-13	3.81E-09
78	Vapona		6.32E-16	3.34E-17	1.81E-21	3.05E-22	1.54E-18	4.78E-25	5.24E-19	6.67E-16
79	Vinyl acetate		8.97E-15	NA	NA	NA	NA	NA	NA	8.97E-15
80	Vinyl chloride		8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15
81	Xylenes (total)		1.53E-15	NA	NA	NA	NA	NA	NA	1.55E-15
82										
83	INORGANICS									
84	Arsenic		9.60E-12	6.58E-15	1.32E-14	7.45E-17	2.34E-14	1.10E-14	7.97E-16	9.66E-12
85	Cadmium		7.02E-14	1.45E-16	3.43E-17	6.47E-19	1.71E-16	NA	5.82E-18	7.06E-14
86	Chromium (III)		2.84E-13	NA	NA	NA	NA	NA	NA	2.84E-13
87	Chromium (VI)		1.00E-14	NA	NA	NA	NA	NA	NA	1.00E-14
88	Copper		7.18E-13	NA	NA	NA	NA	2.64E-15	NA	7.20E-13
89	Iron		2.19E-08	NA	NA	NA	NA	NA	NA	2.19E-08
90	Lead		3.69E-13	NA	NA	NA	NA	NA	NA	3.69E-13
91	Mercury		4.57E-13	1.18E-15	8.81E-17	2.85E-15	1.11E-15	NA	3.79E-17	4.63E-13
92	Selenium		1.18E-12	NA	NA	NA	NA	NA	NA	1.18E-12
93	Silver		7.34E-15	NA	NA	NA	NA	NA	NA	7.34E-15
94	Zinc		3.24E-12	NA	NA	NA	NA	5.84E-15	NA	3.24E-12
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2	3	4	5	6	7	8	9	10	11	12
TABLE 5										
CHILD TOTAL EXPOSURE - MAXIMUM										
13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56
57	58	59	60							
SENSITIVITY CASE										
18-Jun-91										
16:16:24										
RES-A										
ORGANICS										
Acetone	Acetonitrile	Acrylonitrile	Aldrin	Aniline	Atrazine	Benzaldehyde	Benzene	Benzofuran	Benzoic Acid	Benzonitrile
Benzothiazole	Biphenyl	Bis(2-ethylhexyl)phthalate	Carbazole	Carbon Tetrachloride	4-Chloroaniline	Chlorobenzene	4-Chlorobiphenyl	Chloroethane	Chloroform	Dibenzofuran
Dichlorobenzenes (total)	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethene	1,2-Dichloropropane	Dieldrin	Dimethylsulfide	Hexachlorobenzene	Hydrazine
Lindane	Malathion	Methyl chloride	Methylene chloride	Methyl ethyl ketone	4-Methylphenol	Monomethyl hydrazine	Naphthalene	Naphthalene carbonitrile	n-Nitrosodimethylamine	PAHS
Acenaphthalene	Acenaphthene	Benzo(a)pyrene								
INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)			
2.85E-14	2.19E-11	1.40E-17	2.36E-18	6.38E-14	1.75E-20	2.17E-14	2.85E-14			
2.58E-11	NA	NA	NA	NA	NA	NA	4.79E-11			
1.10E-11	NA	NA	NA	NA	NA	NA	1.10E-11			
4.01E-17	7.04E-18	8.37E-18	4.10E-19	9.90E-20	6.34E-27	3.37E-20	5.60E-17			
1.45E-12	1.77E-13	2.69E-18	4.43E-19	3.59E-15	5.27E-19	1.22E-15	1.63E-12			
8.97E-15	3.87E-16	1.25E-19	1.69E-20	2.22E-17	0.00E+00	7.55E-18	9.38E-15			
6.61E-13	4.63E-14	2.23E-18	3.58E-19	1.63E-15	5.67E-20	5.57E-16	7.10E-13			
8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15			
3.22E-12	1.39E-13	4.42E-17	5.98E-18	7.95E-15	1.25E-18	2.71E-15	3.37E-12			
3.24E-13	1.69E-14	1.67E-18	2.60E-19	8.00E-16	7.46E-20	2.73E-16	3.42E-13			
7.07E-12	4.63E-13	2.60E-17	4.15E-18	1.75E-14	6.74E-19	5.95E-15	7.55E-12			
3.01E-15	1.44E-16	1.83E-20	2.79E-21	7.44E-18	5.67E-24	2.53E-18	3.17E-15			
3.24E-12	NA	NA	NA	NA	NA	NA	3.24E-12			
1.78E-15	2.46E-16	7.91E-15	3.83E-16	4.39E-18	7.34E-24	1.50E-18	1.03E-14			
1.45E-14	5.02E-16	4.96E-19	5.56E-20	3.59E-17	7.46E-21	1.22E-17	1.51E-14			
4.21E-14	NA	NA	NA	NA	NA	NA	4.21E-14			
8.31E-16	4.28E-17	4.11E-21	6.40E-22	2.05E-18	2.13E-21	6.99E-19	8.77E-16			
2.00E-15	NA	NA	NA	NA	NA	NA	2.00E-15			
2.05E-15	5.50E-17	1.52E-18	9.48E-20	5.06E-18	7.66E-22	1.72E-18	2.11E-15			
1.03E-16	2.63E-18	3.41E-19	1.86E-20	2.55E-19	1.29E-23	8.67E-20	1.06E-16			
7.34E-14	5.13E-15	2.50E-19	4.01E-20	1.81E-16	4.32E-23	6.18E-17	7.87E-14			
3.58E-13	NA	NA	NA	NA	NA	NA	3.58E-13			
6.45E-14	1.89E-15	9.63E-18	7.80E-19	1.59E-16	4.94E-20	5.43E-17	6.67E-14			
8.31E-15	NA	NA	NA	NA	NA	NA	8.31E-15			
5.25E-16	NA	NA	NA	NA	NA	NA	5.25E-16			
2.38E-14	NA	NA	NA	NA	NA	NA	2.38E-14			
7.43E-15	1.10E-15	2.51E-20	4.02E-21	1.84E-17	1.29E-22	6.25E-18	8.55E-15			
1.27E-14	NA	NA	NA	NA	NA	NA	1.27E-14			
1.10E-14	NA	NA	NA	NA	NA	NA	1.10E-14			
4.71E-15	7.77E-17	9.88E-19	5.05E-20	1.82E-19	2.44E-24	6.19E-20	4.71E-15			
2.02E-14	NA	NA	NA	NA	NA	NA	2.02E-14			
1.93E-13	6.17E-15	5.04E-16	2.79E-17	4.81E-16	9.71E-19	1.64E-16	2.02E-13			
2.51E-10	6.48E-09	9.55E-18	1.62E-18	6.21E-13	7.96E-20	2.12E-13	6.73E-09			
3.42E-17	1.25E-18	1.19E-21	2.41E-22	8.45E-20	1.07E-25	2.88E-17	3.56E-17			
1.01E-16	3.15E-18	1.88E-21	2.41E-22	2.50E-19	0.00E+00	8.50E-20	1.04E-16			
9.87E-15	NA	NA	NA	NA	NA	NA	9.87E-15			
5.96E-13	NA	NA	NA	NA	NA	NA	5.96E-13			
1.25E-14	5.18E-15	1.22E-20	2.04E-21	3.08E-17	0.00E+00	1.05E-17	1.77E-14			
1.13E-14	8.92E-16	6.34E-20	9.75E-21	2.80E-17	6.13E-23	9.53E-18	1.23E-14			
7.93E-11	1.53E-09	3.01E-18	5.10E-19	1.96E-13	2.52E-20	6.67E-14	1.61E-09			
1.34E-15	5.21E-17	5.02E-20	5.51E-21	3.30E-18	3.35E-19	1.12E-18	1.59E-15			
7.07E-12	2.75E-13	2.66E-16	2.92E-17	1.75E-14	7.72E-18	5.95E-15	7.36E-12			
8.06E-14	7.14E-13	3.13E-20	5.29E-21	1.99E-16	0.00E+00	6.78E-17	7.95E-13			
3.22E-13	1.27E-14	4.36E-17	3.60E-18	7.95E-16	2.37E-19	2.71E-16	3.35E-13			
3.22E-13	9.74E-15	3.28E-17	2.87E-18	7.95E-16	9.18E-20	2.71E-16	3.32E-13			
6.45E-13	1.44E-14	1.43E-14	7.21E-16	1.59E-15	3.17E-19	5.43E-16	6.77E-13			

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
61	2		TABLE 5							
62		Chrysene	6.45E-14	1.69E-15	3.42E-16	1.81E-17	1.59E-16	8.01E-19	5.43E-17	6.68E-14
63		Dibenzo(a,h)anthracene	6.45E-13	1.47E-14	1.72E-14	8.61E-16	1.59E-15	1.79E-16	5.43E-16	6.80E-13
64		Fluoranthene	6.45E-13	1.95E-14	9.62E-16	5.56E-17	1.59E-15	NA	5.43E-16	6.68E-13
65		Phenanthrene	2.51E-16	7.42E-18	9.29E-20	6.38E-21	6.21E-19	6.60E-20	5.43E-17	6.69E-14
66		Pyrene	1.29E-12	3.84E-14	1.76E-15	1.03E-16	3.19E-15	2.27E-19	2.12E-19	2.60E-16
67		Parathion	1.60E-16	4.92E-18	1.33E-20	1.22E-21	3.95E-19	3.62E-18	1.09E-15	1.34E-12
68		Pentachlorobenzene	7.93E-14	3.23E-15	8.69E-17	5.18E-18	1.96E-16	7.17E-25	1.35E-19	1.65E-16
69		Phenol	1.27E-15	1.88E-16	4.19E-21	6.73E-22	3.13E-18	NA	6.67E-17	8.28E-14
70		Pyridine	7.07E-12	NA	NA	NA	NA	NA	1.07E-18	1.46E-15
71		Quinoline	7.27E-14	4.72E-15	4.51E-19	6.86E-20	1.80E-16	1.43E-20	NA	7.07E-12
72		Tetrachlorobenzene	3.89E-14	2.57E-15	9.55E-18	7.03E-19	9.62E-17	NA	6.12E-17	7.77E-14
73		Tetrachloroethene	1.36E-15	NA	NA	NA	NA	NA	3.28E-17	4.17E-14
74		Toluene	2.17E-14	NA	NA	NA	NA	NA	NA	1.36E-15
75		Trichlorobenzene	1.97E-14	5.34E-16	2.25E-18	1.93E-19	4.87E-17	2.17E-20	NA	2.17E-14
76		Trichloroethene	1.45E-14	NA	NA	NA	NA	NA	1.66E-17	2.03E-14
77		Unsym. dimethyl hydrazine	3.13E-10	3.55E-09	2.25E-17	3.81E-18	7.72E-13	9.92E-20	NA	1.45E-14
78		Vapona	6.32E-16	4.73E-17	1.96E-21	3.16E-22	1.56E-18	4.78E-25	2.63E-13	3.87E-09
79		Vinyl acetate	8.97E-15	NA	NA	NA	NA	NA	5.32E-19	6.81E-16
80		Vinyl chloride	8.31E-15	NA	NA	NA	NA	NA	NA	8.97E-15
81		Xylenes (total)	1.55E-15	NA	NA	NA	NA	NA	NA	8.31E-15
82										1.55E-15
83		INORGANICS								
84		Arsenic	9.60E-12	2.10E-13	7.03E-14	3.73E-16	2.37E-14	1.10E-14	8.08E-16	9.92E-12
85		Cadmium	7.02E-14	1.64E-15	1.04E-16	1.25E-18	1.73E-16	NA	5.91E-18	7.21E-14
86		Chromium (III)	2.84E-13	NA	NA	NA	NA	NA	NA	2.84E-13
87		Chromium (VI)	1.00E-14	NA	NA	NA	NA	NA	NA	1.00E-14
88		Copper	7.18E-13	NA	NA	NA	NA	2.64E-15	NA	7.20E-13
89		Iron	2.19E-08	NA	NA	NA	NA	NA	NA	2.19E-08
90		Lead	3.69E-13	NA	NA	NA	NA	NA	NA	3.69E-13
91		Mercury	4.57E-13	1.09E-14	2.93E-16	4.66E-15	1.13E-15	NA	3.85E-17	4.74E-13
92		Selenium	1.18E-12	NA	NA	NA	NA	NA	NA	1.18E-12
93		Silver	7.34E-15	NA	NA	NA	NA	NA	NA	7.34E-15
94		Zinc	3.24E-12	NA	NA	NA	NA	5.84E-15	NA	3.24E-12

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair*br/bw/ugmg

A	B	C	BH	BI	BJ
			TABLE 6		
			INFANT TOTAL EXPOSURE		
			-----MAXIMUM-----		
		18-Jun-91	INHALATION	BREAST MILK	TOTAL
		16:16:24	(mg/kg/day)	(mg/kg/day)	(mg/kg/day)
		RES-A			
1	2		1.87E-14	3.24E-16	1.90E-14
2	3		1.69E-11	8.64E-11	1.03E-10
3	4		7.19E-12	2.22E-14	7.21E-12
4	5		2.62E-17	8.72E-17	1.13E-16
5	6		9.50E-13	2.67E-12	3.62E-12
6	7		5.87E-15	1.53E-14	2.11E-14
7	8		4.33E-13	1.15E-12	1.59E-12
8	9		5.44E-15	6.29E-18	5.45E-15
9	10		2.10E-12	5.47E-12	7.58E-12
10	11		2.12E-13	5.55E-13	7.67E-13
11	12		4.62E-12	1.23E-11	1.69E-11
12	13		1.97E-15	5.14E-15	7.11E-15
13	14		2.12E-12	3.68E-14	2.16E-12
14	15		1.16E-15	8.99E-15	1.02E-14
15	16		9.50E-15	2.44E-14	3.39E-14
16	17		2.76E-14	4.79E-16	2.80E-14
17	18		5.44E-16	1.42E-15	1.97E-15
18	19		1.31E-15	2.27E-17	1.33E-15
19	20		1.34E-15	3.42E-15	4.76E-15
20	21		6.74E-17	1.72E-16	2.39E-16
21	22		4.80E-14	1.28E-13	1.76E-13
22	23		2.34E-13	4.06E-15	2.38E-13
23	24		4.22E-14	1.08E-13	1.50E-13
24	25		5.44E-15	9.44E-17	5.53E-15
25	26		3.44E-16	5.97E-18	3.50E-16
26	27		1.56E-14	2.70E-16	1.58E-14
27	28		4.86E-15	1.44E-14	1.92E-14
28	29		8.33E-15	1.45E-16	8.47E-15
29	30		7.20E-15	1.25E-16	7.33E-15
30	31		3.08E-15	5.35E-17	3.14E-15
31	32		4.82E-17	3.08E-16	3.56E-16
32	33		1.32E-14	2.30E-16	1.35E-14
33	34		1.27E-13	7.38E-14	2.01E-13
34	35		1.65E-10	1.30E-08	1.31E-08
35	36		2.24E-17	5.78E-17	8.01E-17
36	37		6.61E-17	1.69E-16	2.35E-16
37	38		4.66E-15	1.12E-16	6.57E-15
38	39		3.90E-13	6.77E-15	3.97E-13
39	40		8.17E-15	3.08E-14	3.89E-14
40	41		7.41E-15	2.01E-14	2.76E-14
41	42		5.19E-11	2.85E-09	2.90E-09
42	43		8.74E-16	2.27E-15	3.14E-15
43	44		4.62E-12	1.20E-11	1.66E-11
44	45		5.28E-14	1.82E-12	1.88E-12
45	46				
46	47				
47	48				
48	49				
49	50				
50	51				
51	52				
52	53				
53	54				
54	55				
55	56				
56	57				
57	58				
58	59				
59	60				
		Acetone			
		Acetonitrile			
		Acrylonitrile			
		Aldrin			
		Aniline			
		Atrazine			
		Benzaldehyde			
		Benzene			
		Benzofuran			
		Benzoic Acid			
		Benzonitrile			
		Benzothiazole			
		Biphenyl			
		Bis(2-ethylhexyl)phthalate			
		Carbazole			
		Carbon Tetrachloride			
		4-Chloroaniline			
		Chlorobenzene			
		4-Chlorobiphenyl			
		4,4'-Chlorobiphenyl			
		Chloroethane			
		Chloroform			
		Dibenzofuran			
		Dichlorobenzenes (total)			
		1,4-Dichlorobenzene			
		1,1-Dichloroethane			
		1,2-Dichloroethane			
		1,1-Dichloroethene			
		1,2-Dichloroethene			
		1,2-Dichloropropane			
		Dieldrin			
		Dimethyldisulfide			
		Hexachlorobenzene			
		Hydrazine			
		Lindane			
		Malathion			
		Methyl chloride			
		Methylene chloride			
		Methyl ethyl ketone			
		4-Methylphenol			
		Monomethyl hydrazine			
		Naphthalene			
		Naphthalene carbonitrile			
		n-Nitrosodimethylamine			
		PAHS			
		Acenaphthalene			
		Acenaphthene			
		Benzo(a)pyrene			

A	B	C	BH	BI	BJ
2			TABLE 6		
61		Chrysene	4.22E-14	1.08E-13	1.50E-13
62		Dibenzo(a,h)anthracene	4.22E-13	1.08E-12	1.50E-12
63		Fluoranthene	4.22E-13	1.08E-12	1.50E-12
64		Fluorene	4.22E-14	1.08E-13	1.51E-13
65		Phenanthrene	1.65E-16	4.21E-16	5.86E-16
66		Pyrene	8.45E-13	2.16E-12	3.01E-12
67		Parathion	1.05E-16	2.68E-16	3.73E-16
68		Pentachlorobenzene	5.19E-14	3.04E-14	8.23E-14
69		Phenol	8.30E-16	2.45E-15	3.28E-15
70		Pyridine	4.62E-12	8.03E-14	4.70E-12
71		Quinoline	4.76E-14	1.27E-13	1.75E-13
72		Tetrachlorobenzene	2.55E-14	1.55E-14	4.10E-14
73		Tetrachloroethene	8.91E-16	1.55E-17	9.06E-16
74		Toluene	1.42E-14	4.11E-17	1.42E-14
75		Trichlorobenzene	1.29E-14	7.42E-15	2.03E-14
76		Trichloroethene	9.50E-15	1.65E-16	9.66E-15
77		Unsym. dimethyl hydrazine	2.05E-10	7.51E-09	7.71E-09
78		Vapona	4.13E-16	1.11E-15	1.52E-15
79		Vinyl acetate	5.87E-15	1.02E-16	5.97E-15
80		Vinyl chloride	5.44E-15	9.44E-17	5.53E-15
81		Xylenes (total)	1.01E-15	5.87E-19	1.01E-15
82					
83		INORGANICS			
84		Arsenic	6.28E-12	NE	6.28E-12
85		Cadmium	4.59E-14	NE	4.59E-14
86		Chromium (III)	1.86E-13	NE	1.86E-13
87		Chromium (VI)	6.55E-15	NE	6.55E-15
88		Copper	4.70E-13	NE	4.70E-13
89		Iron	1.43E-08	NE	1.43E-08
90		Lead	2.42E-13	NE	2.42E-13
91		Mercury	2.99E-13	NE	2.99E-13
92		Selenium	7.72E-13	NE	7.72E-13
93		Silver	4.80E-15	NE	4.80E-15
94		Zinc	2.12E-12	NE	2.12E-12

br 3.80E+00 M3/day
bw 9.00E+00 Kg
um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A B C D E F G

TABLE 28
CARCINOGENIC SLOPE FACTORS ((mg/kg-day)-1)

			Inhalation Slope Factor	Oral Slope Factor	Dermal Slope Factor	
100	101	102	103	104	105	106
107	108	109	110	111	112	113
114	115	116	117	118	119	120
121	122	123	124	125	126	127
128	129	130	131	132	133	134
135	136	137	138	139	140	141
142	143	144	145	146	147	148
149	150	151	152	153		
RES-A						
SENSITIVITY CASE						
ORGANICS						
Acrylonitrile						
Aldrin						
Aniline						
Benzene						
Bis(2-ethylhexyl)phthalate						
Carbazole						
Carbon Tetrachloride						
Chloroform						
1,4-Dichlorobenzene						
1,1-Dichloroethane						
1,2-Dichloroethane						
1,1-Dichloroethene						
1,2-Dichloropropane						
Dieldrin						
Hexachlorobenzene						
Hydrazine						
Lindane						
Methyl chloride						
Methylene chloride						
4-Methylphenol						
Monomethyl hydrazine						
n-Nitrosodimethylamine						
PAHs						
Benzo(a)pyrene						
Chrysene						
Dibenzo(a,h)anthracene						
Parathion						
Quinoline						
Tetrachloroethene						
Trichloroethene						
Vapona						
Vinyl chloride						
INORGANICS						
Arsenic						
Cadmium						
Chromium (VI)						
Total						
AED Adult Exposure Duration						
CED Child Exposure Duration						
CID Child Inhalation Duration						
IED Infant Exposure Duration						
IID Infant Inhalation Duration						

64
5
1
1
1

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	I	J	K	L	M	N	O
98			TABLE 29						
99			ADULT CARCINOGENIC RISK						
100									
101									
102	RES-A		VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
103			INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	ADULT
104	SENSITIVITY CASE		CARC.	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.
105			RISK	RISK	RISK	RISK	RISK	RISK	RISK
106									
107									
108	ORGANICS								
109	Acrylonitrile		NA	NA	NA	NA	NA	NA	NA
110	Aldrin		6.32E-17	7.43E-19	1.12E-19	1.68E-19	4.36E-26	1.24E-19	6.44E-17
111	Aniline		3.74E-16	2.31E-21	9.04E-22	2.04E-18	1.22E-21	1.50E-18	3.77E-16
112	Benzene		NA	NA	NA	NA	NA	NA	NA
113	Bis(2-ethylhexyl)phthalate		1.75E-18	5.14E-19	6.14E-20	6.14E-21	4.16E-26	4.51E-21	2.34E-18
114	Carbazole		2.13E-18	8.37E-22	3.22E-22	7.16E-20	6.04E-23	5.27E-20	2.25E-18
115	Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA
116	Chloroform		NA	NA	NA	NA	NA	NA	NA
117	1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		4.69E-17	3.31E-22	1.29E-22	1.67E-19	4.76E-24	1.23E-19	4.72E-17
120	1,1-Dichloroethene		NA	NA	NA	NA	NA	NA	NA
121	1,2-Dichloropropane		NA	NA	NA	NA	NA	NA	NA
122	Dieldrin		7.33E-16	1.25E-19	2.95E-20	2.90E-19	1.58E-23	2.14E-19	7.34E-16
123	Hexachlorobenzene		1.93E-15	1.06E-17	3.21E-18	7.67E-17	6.29E-19	5.65E-17	2.08E-15
124	Hydrazine		9.33E-09	4.47E-18	1.75E-18	1.86E-13	9.66E-20	1.37E-13	9.33E-09
125	Lindane		3.77E-19	1.29E-22	4.98E-23	1.10E-20	5.62E-26	8.06E-21	3.96E-19
126	Methyl chloride		NA	NA	NA	NA	NA	NA	NA
127	Methylene chloride		NE	NE	NE	NE	NE	NE	NE
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		7.41E-10	5.17E-19	2.03E-19	2.15E-14	1.12E-20	1.58E-14	7.41E-10
130	n-Nitrosodimethylamine		2.13E-11	2.48E-19	9.74E-20	1.01E-15	0.00E+00	7.46E-16	2.13E-11
131	PAHs								
132	Benzo(a)pyrene		4.57E-15	1.16E-15	2.51E-16	1.83E-15	1.47E-18	1.35E-15	9.16E-15
133	Chrysene		2.17E-15	4.05E-17	1.11E-17	1.83E-16	3.73E-18	1.35E-16	2.54E-15
134	Dibenzo(a,h)anthracene		6.69E-15	1.34E-15	2.81E-16	1.83E-15	8.35E-16	1.35E-15	1.21E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE
136	Quinoline		1.99E-14	7.28E-19	2.85E-19	2.15E-16	6.96E-20	1.58E-16	2.03E-14
137	Tetrachloroethene		NA	NA	NA	NA	NA	NA	NA
138	Trichloroethene		NA	NA	NA	NA	NA	NA	NA
139	Vapona		4.47E-18	8.29E-23	3.25E-23	4.52E-20	5.61E-26	3.32E-20	4.54E-18
140	Vinyl chloride		NA	NA	NA	NA	NA	NA	NA
141									
142	INORGANICS								
143	Arsenic		5.84E-15	3.65E-15	4.78E-17	4.14E-15	7.82E-15	3.05E-15	2.45E-14
144	Cadmium		NA	NA	NA	NA	NA	NA	NA
145	Chromium (VI)		NA	NA	NA	NA	NA	NA	NA
146									
147	Total		1.01E-08	6.21E-15	5.96E-16	2.17E-13	8.66E-15	1.59E-13	1.01E-08

A	B	C	Q	R	S	T	U	V	W	X
98	TABLE 30									
99	CHILD CARCINOGENIC RISK									
100										
101										
102	RES-A									
103	SENSITIVITY CASE									
104										
105										
106										
107										
108	ORGANICS									
109	Acrylonitrile		3.77E-14	NA	3.35E-19	NA	1.19E-19	NA	NA	3.77E-14
110	Aldrin		9.73E-18	7.40E-18	2.18E-20	2.18E-20	1.19E-19	7.70E-27	8.08E-20	1.77E-17
111	Aniline		1.18E-16	5.86E-17	1.76E-22	1.76E-22	1.44E-18	2.15E-22	9.81E-19	1.79E-17
112	Benzene		3.44E-18	NA	NA	NA	NA	NA	NA	3.44E-18
113	Bis(2-ethylhexyl)phthalate		3.56E-19	2.05E-19	1.20E-20	1.20E-20	4.33E-21	7.34E-27	2.95E-21	8.12E-19
114	Carbazole		4.15E-18	2.73E-19	6.28E-23	6.28E-23	5.05E-20	1.07E-23	3.44E-20	4.51E-18
115	Carbon Tetrachloride		7.82E-17	NA	NA	NA	NA	NA	NA	7.82E-17
116	Chloroform		4.14E-16	NA	NA	NA	NA	NA	NA	4.14E-16
117	1,4-Dichlorobenzene		1.80E-19	NA	NA	NA	NA	NA	NA	1.80E-19
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		9.66E-18	6.06E-18	1.49E-22	2.52E-23	1.18E-19	8.40E-25	8.01E-20	1.59E-17
120	1,1-Dichloroethene		2.18E-16	NA	NA	NA	NA	NA	NA	2.18E-16
121	1,2-Dichloropropane		4.58E-18	NA	NA	NA	NA	NA	NA	4.58E-18
122	Dieldrin		1.68E-17	8.58E-17	5.74E-21	5.74E-21	2.05E-19	2.78E-24	1.40E-19	1.03E-16
123	Hexachlorobenzene		4.45E-15	2.30E-16	6.25E-19	6.25E-19	5.42E-17	1.11E-19	3.69E-17	4.77E-15
124	Hydrazine		6.14E-11	1.37E-09	2.02E-18	3.42E-19	1.31E-13	1.70E-20	8.94E-14	1.43E-09
125	Lindane		6.35E-19	4.77E-20	5.84E-23	9.71E-24	7.73E-21	9.91E-27	5.27E-21	6.96E-19
126	Methyl chloride		8.89E-19	NA	NA	NA	NA	NA	NA	8.89E-19
127	Methylene chloride		1.19E-16	NA	NA	NA	NA	NA	NA	1.19E-16
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		1.25E-12	1.19E-10	2.33E-19	3.95E-20	1.52E-14	1.98E-21	1.03E-14	1.20E-10
130	n-Nitrosodimethylamine		5.87E-14	2.56E-12	1.12E-19	1.90E-20	7.15E-16	0.00E+00	4.87E-16	2.62E-12
131	PAHS									
132	Benzo(a)pyrene		5.62E-14	6.06E-16	5.24E-16	4.88E-17	1.29E-15	2.60E-19	8.80E-16	5.96E-14
133	Chrysene		5.62E-15	2.62E-16	1.83E-17	2.15E-18	1.29E-16	6.58E-19	8.80E-17	6.12E-15
134	Dibenzo(a,h)anthracene		5.62E-14	8.50E-16	6.06E-16	5.47E-17	1.29E-15	1.47E-16	8.80E-16	6.01E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		1.25E-14	2.69E-15	3.28E-19	5.54E-20	1.52E-16	1.23E-20	1.03E-16	1.54E-14
137	Tetrachloroethene		6.42E-20	NA	NA	NA	NA	NA	NA	6.42E-20
138	Trichloroethene		2.28E-18	NA	NA	NA	NA	NA	NA	2.28E-18
139	Vapona		2.62E-18	6.92E-19	3.74E-23	6.33E-24	3.19E-20	9.89E-27	2.17E-20	3.36E-18
140	Vinyl chloride		3.50E-17	NA	NA	NA	NA	NA	NA	3.50E-17
141										
142	INORGANICS									
143	Arsenic		2.06E-12	8.23E-16	1.65E-15	9.31E-18	2.92E-15	1.38E-15	1.99E-15	2.07E-12
144	Cadmium		6.12E-15	NA	NA	NA	NA	NA	NA	6.12E-15
145	Chromium (VI)		5.86E-15	NA	NA	NA	NA	NA	NA	5.86E-15
146										
147	Total		6.50E-11	1.49E-09	2.80E-15	1.16E-16	1.53E-13	1.53E-15	1.04E-13	1.55E-09

A	B	C	Z	AA	AB
98			TABLE 31		
99			INFANT CARCINOGENIC RISK		
100					
101					
102					
103	RES-A				
104	SENSITIVITY CASE				
105					
106					
107					
108	ORGANICS				
109	Acrylonitrile		2.46E-14	1.71E-16	2.48E-14
110	Aldrin		6.37E-18	2.12E-17	2.76E-17
111	Aniline		7.74E-17	2.17E-16	2.94E-16
112	Benzene		2.25E-18	2.61E-21	2.26E-18
113	Bis(2-ethylhexyl)phthalate		2.33E-19	1.80E-18	2.03E-18
114	Carbazole		2.71E-18	6.99E-18	9.70E-18
115	Carbon Tetrachloride		5.12E-17	8.89E-19	5.21E-17
116	Chloroform		2.71E-16	3.54E-19	2.71E-16
117	1,4-Dichlorobenzene		1.18E-19	2.05E-21	1.20E-19
118	1,1-Dichloroethane		NE	NE	NE
119	1,2-Dichloroethane		6.32E-18	1.87E-17	2.50E-17
120	1,1-Dichloroethene		1.43E-16	1.24E-18	1.44E-16
121	1,2-Dichloropropane		2.99E-18	5.20E-20	3.05E-18
122	Dieldrin		1.10E-17	7.03E-17	8.13E-17
123	Hexachlorobenzene		2.91E-15	1.69E-15	4.60E-15
124	Hydrazine		4.02E-11	5.56E-10	5.96E-10
125	Lindane		4.16E-19	1.07E-18	1.49E-18
126	Methyl chloride		5.82E-19	2.08E-20	6.02E-19
127	Methylene chloride		7.80E-17	7.25E-19	7.87E-17
128	4-Methylphenol		NE	NE	NE
129	Monomethyl hydrazine		8.15E-13	4.48E-11	4.56E-11
130	n-Nitrosodimethylamine		3.84E-14	1.33E-12	1.37E-12
131	PAHs				
132	Benzo(a)pyrene		3.68E-14	1.77E-13	2.14E-13
133	Chrysene		3.68E-15	1.77E-14	2.14E-14
134	Dibenzo(a,h)anthracene		3.68E-14	1.78E-13	2.15E-13
135	Parathion		NE	NE	NE
136	Quinoline		8.16E-15	2.18E-14	2.99E-14
137	Tetrachloroethene		4.20E-20	1.13E-20	5.33E-20
138	Trichloroethene		1.49E-18	2.59E-20	1.52E-18
139	Vapona		1.71E-18	4.59E-18	6.30E-18
140	Vinyl chloride		2.29E-17	3.10E-18	2.60E-17
141					
142	INORGANICS				
143	Arsenic		1.35E-12	NA	1.35E-12
144	Cadmium		4.00E-15	NA	4.00E-15
145	Chromium (VI)		3.84E-15	NA	3.84E-15
146					
147	Total		4.25E-11	6.03E-10	6.45E-10

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
98	TABLE 32										
99	TOTAL LIFETIME CARCINOGENIC RISK										
100											
101											
102	RES-A										
103	SENSITIVITY CASE										
104											
105											
106											
107											
108	ORGANICS										
109	Acrylonitrile		6.23E-14	1.71E-16	NA	NA	NA	NA	NA	NA	6.25E-14
110	Aldrin		1.61E-17	2.12E-17	7.06E-17	1.08E-18	1.34E-19	2.87E-19	5.13E-26	2.04E-19	1.10E-16
111	Aniline		1.96E-17	2.17E-16	4.32E-16	3.35E-21	1.08E-21	3.48E-18	1.43E-21	2.48E-18	8.51E-16
112	Benzene		5.70E-18	2.61E-21	NA	NA	NA	NA	NA	NA	5.70E-18
113	Bis(2-ethylhexyl)phthalate		5.88E-19	1.80E-18	1.96E-18	7.46E-19	7.33E-20	1.05E-20	4.89E-26	7.46E-21	5.18E-18
114	Carbazole		6.86E-18	6.99E-18	2.40E-18	1.21E-21	3.85E-22	1.22E-19	7.11E-23	8.71E-20	1.65E-17
115	Carbon Tetrachloride		1.29E-16	8.89E-19	NA	NA	NA	NA	NA	NA	1.30E-16
116	Chloroform		6.85E-16	3.54E-19	NA	NA	NA	NA	NA	NA	6.85E-16
117	1,4-Dichlorobenzene		2.98E-19	2.05E-21	NA	NA	NA	NA	NA	NA	3.00E-19
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		1.60E-17	1.87E-17	5.30E-17	4.80E-22	1.55E-22	2.84E-19	5.60E-24	2.03E-19	8.81E-17
120	1,1-Dichloroethene		3.61E-16	1.24E-18	NA	NA	NA	NA	NA	NA	3.62E-16
121	1,2-Dichloropropane		7.57E-18	5.20E-20	NA	NA	NA	NA	NA	NA	7.62E-18
122	Dieldrin		2.78E-17	7.03E-17	8.19E-16	1.81E-19	3.52E-20	4.95E-19	1.86E-23	3.53E-19	9.18E-16
123	Hexachlorobenzene		7.36E-15	1.69E-15	2.16E-15	1.54E-17	3.83E-18	1.31E-16	7.40E-19	9.33E-17	1.14E-14
124	Hydrazine		1.02E-10	5.50E-10	1.07E-08	6.49E-18	2.10E-18	3.17E-13	1.14E-19	2.26E-13	1.14E-08
125	Lindane		1.05E-18	1.07E-18	4.25E-19	1.88E-22	5.95E-23	1.87E-20	6.61E-26	1.33E-20	2.58E-18
126	Methyl chloride		1.47E-18	2.08E-20	NA	NA	NA	NA	NA	NA	1.49E-18
127	Methylene chloride		1.97E-16	7.25E-19	NA	NA	NA	NA	NA	NA	1.98E-16
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		2.06E-12	4.48E-11	8.60E-10	7.50E-19	2.42E-19	3.67E-14	1.32E-20	2.61E-14	9.07E-10
130	n-Nitrosodimethylamine		9.72E-14	1.33E-12	2.39E-11	3.61E-19	1.16E-19	1.73E-15	0.00E+00	1.23E-15	2.53E-11
131	PAHS										
132	Benzo(a)pyrene		9.30E-14	1.77E-13	5.17E-15	1.69E-15	2.99E-16	3.12E-15	1.73E-18	2.23E-15	2.83E-13
133	Chrysene		9.30E-15	1.77E-14	2.43E-15	5.88E-17	1.33E-17	3.12E-16	4.39E-18	2.23E-16	3.01E-14
134	Dibenzo(a,h)anthracene		9.30E-14	1.78E-13	7.32E-15	1.95E-15	3.35E-16	3.12E-15	9.83E-16	2.23E-15	2.87E-13
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		2.06E-14	2.18E-14	2.26E-14	1.06E-18	3.40E-19	3.67E-16	8.19E-20	2.62E-16	6.56E-14
137	Tetrachloroethene		1.06E-19	1.13E-20	NA	NA	NA	NA	NA	NA	1.17E-19
138	Trichloroethene		3.77E-18	2.59E-20	NA	NA	NA	NA	NA	NA	3.80E-18
139	Vapona		4.53E-18	4.59E-18	5.16E-18	1.20E-22	3.88E-23	7.71E-20	6.60E-26	5.49E-20	1.42E-17
140	Vinyl chloride		5.79E-17	3.10E-18	NA	NA	NA	NA	NA	NA	6.10E-17
141											
142	INORGANICS										
143	Arsenic		3.40E-12	NA	6.66E-15	5.29E-15	5.71E-17	7.07E-15	9.20E-15	5.04E-15	3.44E-12
144	Cadmium		1.01E-14	NA	NA	NA	NA	NA	NA	NA	1.01E-14
145	Chromium (VI)		9.70E-15	NA	NA	NA	NA	NA	NA	NA	9.70E-15
146											
147	Total		1.07E-10	6.03E-10	1.16E-08	9.01E-15	7.12E-16	3.70E-13	1.02E-14	2.64E-13	1.23E-08

A	B	C	AN	AO	AP	AQ
98			TABLE 33			
99			TOTAL LIFETIME CARCINOGENIC RISK			
100						
101						
102			INHALATION	INGESTION	DERMAL	TOTAL
103	RES-A		CARC.	CARC.	CARC.	LIFETIME
104	SENSITIVITY CASE		RISK	RISK	RISK	CARC.
105						RISK
106						
107						
108	ORGANICS					
109	Acrylonitrile		6.23E-14	1.71E-16	NA	6.25E-14
110	Aldrin		1.61E-17	9.33E-17	2.04E-19	1.10E-16
111	Aniline		1.96E-16	6.53E-16	2.48E-18	8.51E-16
112	Benzene		5.70E-18	2.61E-21	NA	5.70E-18
113	Bis(2-ethylhexyl)phthalate		5.88E-19	4.59E-18	7.46E-21	5.18E-18
114	Carbazole		6.86E-18	9.51E-18	8.71E-20	1.65E-17
115	Carbon Tetrachloride		1.29E-16	8.89E-19	NA	1.30E-16
116	Chloroform		6.85E-16	3.54E-19	NA	6.85E-16
117	1,4-Dichlorobenzene		2.98E-19	2.05E-21	NA	3.00E-19
118	1,1-Dichloroethane		NE	NE	NE	NE
119	1,2-Dichloroethane		1.60E-17	7.20E-17	2.03E-19	8.81E-17
120	1,1-Dichloroethene		3.61E-16	1.24E-18	NA	3.62E-16
121	1,2-Dichloropropane		7.57E-18	5.20E-20	NA	7.62E-18
122	Dieldrin		2.78E-17	8.90E-16	3.53E-19	9.18E-16
123	Hexachlorobenzene		7.36E-15	4.00E-15	9.33E-17	1.14E-14
124	Hydrazine		1.02E-10	1.13E-08	2.26E-13	1.14E-08
125	Lindane		1.05E-18	1.52E-18	1.33E-20	2.58E-18
126	Methyl chloride		1.47E-18	2.08E-20	NA	1.49E-18
127	Methylene chloride		1.97E-16	7.25E-19	NA	1.98E-16
128	4-Methylphenol		NE	NE	NE	NE
129	Monomethyl hydrazine		2.06E-12	9.05E-10	2.61E-14	9.07E-10
130	n-Nitrosodimethylamine		9.72E-14	2.52E-11	1.23E-15	2.53E-11
131	PAHs					
132	Benzo(a)pyrene		9.30E-14	1.88E-13	2.23E-15	2.83E-13
133	Chrysene		9.30E-15	2.03E-14	2.23E-16	3.01E-14
134	Dibenzo(a,h)anthracene		9.30E-14	1.92E-13	2.23E-15	2.87E-13
135	Parathion		NE	NE	NE	NE
136	Quinoline		2.06E-14	4.48E-14	2.62E-16	6.56E-14
137	Tetrachloroethene		1.06E-19	1.13E-20	NA	1.17E-19
138	Trichloroethene		3.77E-18	2.59E-20	NA	3.80E-18
139	Vapona		4.33E-18	9.82E-18	5.49E-20	1.42E-17
140	Vinyl chloride		5.79E-17	3.10E-18	NA	6.10E-17
141						
142	INORGANICS					
143	Arsenic		3.40E-12	2.83E-14	5.04E-15	3.44E-12
144	Cadmium		1.01E-14	NA	NA	1.01E-14
145	Chromium (VI)		9.70E-15	NA	NA	9.70E-15
146						
147	Total		1.07E-10	1.22E-08	2.64E-13	1.23E-08

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 34		
156		REFERENCE DOSES FOR NONCARCINOGENIC		
157		EFFECTS (mg/kg-day)		
158		Inhalation	Oral	Dermal
159		RfD	RfD	RfD
160				
161	RES-A			
162	SENSITIVITY CASE			
163				
164				
165	ORGANICS			
166	Acetone	1.82E+00	1.00E-01	NC
167	Acetonitrile	1.00E-02	6.00E-02	3.00E-02
168	Acrylonitrile	4.39E-03	2.70E-04	NC
169	Aldrin	2.55E-04	3.00E-05	1.50E-05
170	Aniline	7.76E-03	1.95E-03	9.75E-04
171	Atrazine	5.10E-03	5.00E-03	2.50E-03
172	Benzaldehyde	1.00E-01	1.00E-01	5.00E-02
173	Benzene	3.26E-02	1.00E-03	NC
174	Benzofuran	5.00E-03	5.00E-03	2.50E-03
175	Benzoic Acid	4.00E+00	4.00E+00	2.00E+00
176	Benzonitrile	8.00E-03	8.00E-03	4.00E-03
177	Benzothiazole	1.00E-03	1.00E-03	5.00E-04
178	Biphenyl	1.33E-03	5.00E-02	NC
179	Bis(2-ethylhexyl)phthalate	5.10E-03	4.00E-03	1.00E-02
180	Carbazole	5.00E-03	5.00E-03	2.50E-03
181	Carbon Tetrachloride	3.16E-02	7.00E-04	NC
182	4-Chloroaniline	4.00E-03	4.00E-03	2.00E-03
183	Chlorobenzene	5.00E-03	2.00E-02	NC
184	4-Chlorobiphenyl	2.45E-02	2.45E-02	1.22E-02
185	4,4'-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
186	Chloroethane	2.65E+00	NA	NC
187	Chloroform	5.00E-02	1.00E-02	NC
188	Dibenzofuran	NA	NA	NA
189	Dichlorobenzenes (total)	4.00E-02	9.00E-02	NC
190	1,1-Dichloroethane	1.00E-01	1.00E-01	NC
191	1,2-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
192	1,1-Dichloroethene	2.04E-02	9.00E-03	NC
193	1,2-Dichloroethene	8.10E-01	2.00E-02	NC
194	1,2-Dichloropropane	3.54E-01	8.60E-03	NC
195	Dieldrin	2.55E-04	5.00E-05	2.50E-05
196	Dimethyldisulfide	8.10E-03	8.10E-03	NC
197	Hexachlorobenzene	8.00E-04	8.00E-04	4.00E-04
198	Hydrazine	1.33E-04	6.00E-04	3.00E-04
199	Lindane	5.10E-04	3.00E-04	1.50E-04
200	Malathion	1.02E-02	2.00E-02	1.00E-02
201	Methyl chloride	1.05E-01	1.80E-02	NC
202	Methylene chloride	8.57E-01	6.00E-02	NC
203	Methyl ethyl ketone	9.00E-02	5.00E-01	2.50E-01
204	4-Methylphenol	1.02E-02	5.00E-02	2.50E-02
205	Monomethyl hydrazine	1.94E-05	2.20E-04	1.10E-04
206	Naphthalene	5.10E-02	4.00E-03	2.00E-03
207	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
208	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
209	PAHs			
210	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
211	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
212	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
213	Chrysene	3.00E-02	3.00E-02	1.50E-02
214				

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 34		
156		3.00E-02	3.00E-02	1.50E-02
215	Dibenzo(a,h)anthracene	4.00E-02	4.00E-02	2.00E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Fluorene	3.00E-02	3.00E-02	1.50E-02
218	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
219	Pyrene	5.10E-05	6.00E-03	3.00E-03
220	Parathion	8.00E-04	8.00E-04	4.00E-04
221	Pentachlorobenzene	1.94E-02	6.00E-01	3.00E-01
222	Phenol	1.63E-02	1.00E-03	NC
223	Pyridine	2.00E-01	2.00E-01	1.00E-01
224	Quinoline	3.00E-04	3.00E-04	1.50E-04
225	Tetrachlorobenzene	3.46E-01	1.00E-02	NC
226	Tetrachloroethene	5.71E-01	2.00E-01	NC
227	Toluene	3.00E-03	2.00E-02	1.00E-02
228	Trichlorobenzene	2.74E-01	7.35E-03	NC
229	Trichloroethene	1.22E-03	1.22E-03	6.10E-04
230	Unsym. dimethyl hydrazine	8.00E-04	8.00E-04	4.00E-04
231	Vapona	2.00E-01	1.00E+00	NC
232	Vinyl acetate	1.33E-02	1.30E-03	NC
233	Vinyl chloride	8.57E-02	2.00E+00	NC
234	Xylenes (total)			
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

TABLE 35 ADULT HAZARD INDEX										
C	B	H	I	J	K	L	M	N	O	
		INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX	
155	RES-A	6.94E-15	NA	NA	NA	NA	NA	NA	6.94E-15	
156	SENSITIVITY CASE	1.14E-09	2.05E-10	4.04E-17	1.57E-17	1.18E-13	1.29E-19	8.66E-14	1.35E-09	
157		1.11E-09	NA	NA	NA	NA	NA	NA	1.11E-09	
158		6.96E-14	1.53E-13	4.83E-14	5.48E-15	3.66E-16	9.36E-23	2.69E-16	2.77E-13	
159		8.28E-11	4.58E-11	2.38E-16	9.12E-17	2.04E-13	1.20E-16	1.50E-13	1.29E-10	
160		7.79E-13	4.38E-14	4.33E-18	1.35E-18	4.91E-16	0.00E+00	3.61E-16	8.23E-13	
161		2.93E-12	2.39E-13	3.87E-18	1.44E-18	1.81E-15	2.51E-19	1.33E-15	3.17E-12	
162		1.13E-13	NA	NA	NA	NA	NA	NA	1.13E-13	
163		2.85E-10	1.58E-11	1.53E-15	4.80E-16	1.76E-13	1.11E-16	1.29E-13	3.01E-10	
164		3.59E-14	2.22E-15	7.25E-20	2.60E-20	2.21E-17	5.49E-21	1.63E-17	3.81E-14	
165	ORGANICS	3.91E-10	2.99E-11	5.63E-16	2.08E-16	2.42E-13	3.73E-17	1.78E-13	4.21E-10	
166	Acetone	1.33E-12	7.62E-14	3.16E-18	1.12E-18	8.24E-16	2.51E-21	6.06E-16	1.41E-12	
167	Acetonitrile	1.08E-09	NA	NA	NA	NA	NA	NA	1.08E-09	
168	Acrylonitrile	1.54E-13	3.98E-14	3.42E-13	3.84E-14	1.22E-16	8.13E-22	1.79E-17	5.75E-13	
169	Aldrin	1.29E-12	5.68E-14	1.72E-17	4.46E-18	7.94E-16	6.61E-19	5.84E-16	1.34E-12	
170	Aniline	5.90E-13	NA	NA	NA	NA	NA	NA	5.90E-13	
171	Atrazine	9.20E-14	5.54E-15	1.78E-19	6.41E-20	5.68E-17	2.36E-19	4.18E-17	9.76E-14	
172	Benzaldehyde	1.77E-13	NA	NA	NA	NA	NA	NA	1.77E-13	
173	Benzene	3.70E-14	1.26E-15	1.07E-17	1.55E-18	2.29E-17	1.39E-20	1.69E-17	3.83E-14	
174	Benzo(a)pyrene	1.96E-15	6.28E-17	2.54E-18	3.20E-19	1.21E-18	2.45E-22	8.94E-19	2.03E-15	
175	Benzoic Acid	1.23E-14	NE	NE	NE	NE	NE	NE	1.23E-14	
176	Benzo(a)pyrene	3.17E-12	NA	NA	NA	NA	NA	NA	3.17E-12	
177	Benzothiazole	9.20E-14	NA	NA	NA	NA	NA	NA	9.20E-14	
178	Biphenyl	1.05E-13	NA	NA	NA	NA	NA	NA	1.05E-13	
179	Bis(2-ethylhexyl)phthalate	8.06E-14	1.34E-13	8.88E-19	3.30E-19	4.16E-16	1.17E-20	3.06E-16	2.16E-13	
180	Carbazole	2.76E-13	NA	NA	NA	NA	NA	NA	2.76E-13	
181	Carbon Tetrachloride	6.02E-15	NA	NA	NA	NA	NA	NA	6.02E-15	
182	4-Chloroaniline	5.89E-15	NA	NA	NA	NA	NA	NA	5.89E-15	
183	Chlorobenzene	1.28E-13	1.03E-12	3.42E-15	4.05E-16	4.03E-16	2.16E-20	2.96E-16	1.17E-12	
184	4-Chlorobiphenyl	1.11E-12	NA	NA	NA	NA	NA	NA	1.11E-12	
185	4,4'-Dichlorobiphenyl	1.08E-10	4.46E-12	1.09E-13	1.40E-14	6.65E-14	5.38E-16	4.89E-14	1.12E-10	
186	Chloroethane	8.37E-07	5.76E-06	2.76E-15	1.08E-15	1.15E-10	5.87E-17	8.43E-11	6.59E-06	
187	Chloroform	2.97E-14	2.38E-15	6.85E-19	1.77E-19	3.12E-17	1.58E-22	2.29E-17	3.21E-14	
188	Dibenzofuran	4.39E-15	8.49E-17	1.63E-20	4.82E-21	1.38E-18	0.00E+00	1.02E-18	4.47E-15	
189	Dichlorobenzenes (total)	4.16E-14	NA	NA	NA	NA	NA	NA	4.16E-14	
190	1,1-Dichloroethane	3.08E-13	NA	NA	NA	NA	NA	NA	3.08E-13	
191	1,2-Dichloroethane	6.14E-14	5.85E-15	4.22E-21	1.64E-21	6.83E-18	0.00E+00	5.02E-18	6.73E-14	
192	1,1-Dichloroethene	4.92E-13	1.03E-14	2.20E-19	7.82E-20	6.20E-17	5.43E-22	4.56E-17	5.02E-13	
193	1,2-Dichloropropane	1.81E-06	3.40E-06	2.37E-15	9.30E-16	9.86E-11	5.07E-17	7.25E-11	5.21E-06	
194	Dieldrin	1.16E-14	7.54E-15	2.18E-18	5.53E-19	9.14E-17	3.71E-17	6.72E-17	1.93E-14	
195	Dimethyldisulfide	6.14E-11	3.99E-11	1.15E-14	2.92E-15	4.83E-13	8.55E-16	3.56E-13	1.02E-10	
196	Hexachlorobenzene	1.28E-10	1.66E-09	1.94E-17	7.58E-18	7.88E-14	0.00E+00	5.79E-14	1.79E-09	
197	Hydrazine	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
198	Lindane	9.53E-12	9.17E-14	9.46E-17	1.92E-17	1.47E-15	6.78E-19	1.08E-15	2.47E-12	
199	Malathion	9.53E-13	2.61E-13	8.25E-14	9.63E-15	5.89E-15	4.67E-18	4.33E-15	9.89E-12	
200	Methyl chloride	9.53E-13	3.16E-14	1.98E-15	2.43E-16	5.89E-16	1.18E-17	4.33E-16	9.89E-12	
201	Methylene chloride	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
202	Methyl ethyl ketone	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
203	4-Methylphenol	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
204	Monomethyl hydrazine	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
205	Naphthalene	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
206	Naphthalene carbonitrile	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
207	n-Nitrosodimethylamine	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
208	PAHs	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
209	Acenaphthalene	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
210	Acenaphthene	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
211	Benzo(a)pyrene	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	
212	Chrysene	2.37E-12	1.25E-13	1.26E-16	2.40E-17	1.47E-15	1.75E-18	1.08E-15	2.50E-12	

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	H	I	J	K	L	M	N	O
155		TABLE 35							
156		9.53E-12	2.67E-13	9.90E-14	1.15E-14	5.89E-15	2.65E-15	4.33E-15	9.92E-12
215	Dibenzo(a,h)anthracene	7.15E-12	2.80E-13	4.16E-15	5.58E-16	4.41E-15	NA	3.25E-15	7.44E-12
216	Fluoranthene	7.15E-13	3.01E-14	6.99E-17	1.19E-17	2.29E-16	7.30E-19	3.25E-16	7.45E-13
217	Fluorene	3.71E-15	1.41E-16	5.36E-19	8.53E-20	2.29E-18	3.35E-18	1.69E-18	3.86E-15
218	Phenanthrene	1.91E-11	7.31E-13	1.02E-14	1.37E-15	1.18E-14	5.35E-17	8.66E-15	1.98E-11
219	Pyrene	1.39E-12	4.64E-16	3.84E-19	8.15E-20	7.29E-18	5.29E-23	5.36E-18	1.39E-12
220	Parathion	4.39E-11	2.41E-12	1.88E-14	2.60E-15	2.71E-14	NA	1.99E-14	4.64E-11
221	Pentachlorobenzene	2.89E-14	1.87E-16	1.21E-21	4.50E-22	5.78E-19	NA	4.25E-19	2.91E-14
222	Phenol	1.92E-10	NA	NA	NA	NA	NA	NA	1.92E-10
223	Pyridine	1.61E-13	1.34E-14	3.91E-19	1.38E-19	9.94E-17	3.17E-20	7.32E-17	1.75E-13
224	Quinoline	5.75E-11	5.34E-12	5.51E-15	9.40E-16	3.55E-14	NA	2.61E-14	6.29E-11
225	Tetrachlorobenzene	1.74E-15	NA	NA	NA	NA	NA	NA	1.74E-15
226	Tetrachloroethene	1.68E-14	1.48E-14	1.95E-17	3.86E-18	2.70E-16	4.80E-19	1.98E-16	1.68E-14
227	Toluene	2.91E-12	NA	NA	NA	NA	NA	NA	2.93E-12
228	Trichlorobenzene	2.35E-14	NA	NA	NA	NA	NA	NA	2.35E-14
229	Trichloroethene	1.13E-07	1.58E-06	3.19E-15	1.25E-15	7.01E-11	3.60E-17	5.16E-11	1.69E-06
230	Unsym. dimethyl hydrazine	3.50E-13	3.04E-14	4.24E-19	1.58E-19	2.16E-16	2.64E-22	1.59E-16	3.81E-13
231	Vapona	1.99E-14	NA	NA	NA	NA	NA	NA	1.99E-14
232	Vinyl acetate	2.77E-13	NA	NA	NA	NA	NA	NA	2.77E-13
233	Vinyl chloride	8.00E-15	NA	NA	NA	NA	NA	NA	8.00E-15
234	Xylenes (total)								
235									
236	INORGANICS								
237	Arsenic	2.08E-08	1.14E-10	1.22E-11	1.50E-13	2.63E-12	4.89E-12	1.93E-12	2.10E-08
238	Cadmium	6.10E-10	8.90E-13	1.80E-14	5.03E-16	1.92E-14	NA	1.41E-14	6.11E-10
239	Chromium (III)	2.47E-10	NA	NA	NA	NA	NA	NA	2.47E-10
240	Chromium (VI)	8.69E-11	NA	NA	NA	NA	NA	NA	8.69E-11
241	Copper	3.18E-11	NA	NA	NA	NA	3.08E-14	NA	3.18E-11
242	Iron	9.52E-06	NA	NA	NA	NA	NA	NA	9.52E-06
243	Mercury	2.36E-09	1.99E-11	1.69E-13	6.23E-12	4.17E-13	NA	3.07E-13	2.39E-09
244	Selenium	2.56E-09	NA	NA	NA	NA	NA	NA	2.56E-09
245	Silver	3.19E-10	NA	NA	NA	NA	NA	NA	3.19E-10
246	Zinc	1.75E-10	NA	NA	NA	NA	1.29E-14	NA	1.75E-10
247									
248	Total (Hazard Index)	1.23E-05	1.07E-05	1.31E-11	6.48E-12	2.88E-10	4.94E-12	2.12E-10	2.31E-05

B	C	Q	R	S	T	U	V	W	X
155	156	157	158	159	160	161	162	163	164
165	166	167	168	169	170	171	172	173	174
175	176	177	178	179	180	181	182	183	184
185	186	187	188	189	190	191	192	193	194
195	196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213	214
RES-A	SENSITIVITY CASE	INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL CHILD HAZARD INDEX
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300
301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400
401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500
501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550
551	552	553	554	555	556	557	558	559	560
561	562	563	564	565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600
601	602	603	604	605	606	607	608	609	610
611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630
631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650
651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670
671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699	700
701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750
751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770
771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790
791	792	793	794	795	796	797	798	799	800
801	802	803	804	805	806	807	808	809	810
811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850
851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890
891	892	893	894	895	896	897	898	899	900
901	902	903	904	905	906	907	908	909	910
911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1000
1001	1002	1003	1004	1005	1006	1007	1008	1009	1010
1011	1012	1013	1014	1015	1016	1017	1018	1019	1020
1021	1022	1023	1024	1025	1026	1027	1028	1029	1030
1031	1032	1033	1034	1035	1036	1037	1038	1039	1040
1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070
1071	1072	1073	1074	1075	1076	1077	1078	1079	1080
1081	1082	1083	1084	1085	1086	1087	1088	1089	1090
1091	1092	1093	1094	1095	1096	1097	1098	1099	1100
1101	1102	1103	1104	1105	1106	1107	1108	1109	1110
1111	1112	1113	1114	1115	1116	1117	1118	1119	1120
1121	1122	1123	1124	1125	1126	1127	1128	1129	1130
1131	1132	1133	1134	1135	1136	1137	1138	1139	1140
1141	1142	1143	1144	1145	1146	1147	1148	1149	1150
1151	1152	1153	1154	1155	1156	1157	1158	1159	1160
1161	1162	1163	1164	1165	1166	1167	1168	1169	1170
1171	1172	1173	1174	1175	1176	1177	1178	1179	1180
1181	1182	1183	1184	1185	1186	1187	1188	1189	1190
1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
1201	1202	1203	1204	1205	1206	1207	1208	1209	1210
1211	1212	1213	1214	1215	1216	1217	1218	1219	1220
1221	1222	1223	1224	1225	1226	1227	1228	1229	1230
1231	1232	1233	1234	1235	1236	1237	1238	1239	1240
1241	1242	1243	1244	1245	1246	1247	1248	1249	1250
1251	1252	1253	1254	1255	1256	1257	1258	1259	1260
1261	1262	1263	1264	1265	1266	1267	1268	1269	1270
1271	1272	1273	1274	1275	1276	1277	1278	1279	1280
1281	1282	1283	1284	1285	1286	1287	1288	1289	1290
1291	1292	1293	1294	1295	1296	1297	1298	1299	1300
1301	1302	1303	1304	1305	1306	1307	1308	1309	1310
1311	1312	1313	1314	1315	1316	1317	1318	1319	1320
1321	1322	1323	1324	1325	1326	1327	1328	1329	1330
1331	1332	1333	1334	1335	1336	1337	1338	1339	1340
1341	1342	1343	1344	1345	1346	1347	1348	1349	1350
1351	1352	1353	1354	1355	1356	1357	1358	1359	1360
1361	1362	1363	1364	1365	1366	1367	1368	1369	1370
1371	1372	1373	1374	1375	1376	1377	1378	1379	1380
1381	1382	1383	1384	1385	1386	1387	1388	1389	1390
1391	1392	1393	1394	1395	1396	1397	1398	1399	1400
1401	1402	1403	1404	1405	1406	1407	1408	1409	1410
1411	1412	1413	1414	1415	1416	1417	1418	1419	1420
1421	1422	1423	1424	1425	1426	1427	1428	1429	1430
1431	1432	1433	1434	1435	1436	1437	1438	1439	1440
1441	1442	1443	1444	1445	1446	1447	1448	1449	1450
1451	1452	145							

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	Q	R	S	T	U	V	W	X
155		TABLE 36							
156		2.13E-11	4.91E-13	5.72E-13	2.87E-14	5.32E-14	5.98E-15	3.62E-14	2.27E-11
215	Dibenzo(a,h)anthracene	1.61E-11	4.89E-13	2.40E-14	1.39E-15	3.99E-14	NA	2.72E-14	1.67E-11
216	Fluoranthene	1.61E-12	5.22E-14	4.04E-16	2.96E-17	3.99E-15	1.65E-18	2.72E-15	1.67E-12
217	Fluorene	8.38E-15	2.47E-16	3.10E-18	2.13E-19	2.07E-17	7.57E-18	1.41E-17	8.67E-15
218	Phenanthrene	4.30E-11	1.28E-12	5.87E-14	3.42E-15	1.06E-13	1.21E-16	7.24E-14	4.45E-11
219	Pyrene	3.13E-12	8.20E-16	2.22E-18	2.03E-19	6.58E-17	1.19E-22	4.49E-17	3.14E-12
220	Parathion	9.91E-11	4.04E-12	1.09E-13	6.48E-15	2.45E-13	NA	1.67E-13	1.04E-10
221	Pentachlorobenzene	6.54E-14	3.14E-16	6.99E-21	1.12E-21	5.22E-18	NA	3.56E-18	6.57E-14
222	Phenol	4.33E-10	NA	NA	NA	NA	NA	NA	4.33E-10
223	Pyridine	3.63E-13	2.36E-14	2.26E-18	3.43E-19	8.98E-16	7.16E-20	6.12E-16	3.89E-13
224	Quinoline	1.30E-10	8.57E-12	3.18E-14	2.34E-15	3.21E-13	NA	2.19E-13	1.39E-10
225	Tetrachlorobenzene	3.93E-15	NA	NA	NA	NA	NA	NA	3.93E-15
226	Tetrachloroethene	3.80E-14	2.67E-14	1.13E-16	9.63E-18	2.44E-15	1.08E-18	1.66E-15	3.80E-14
227	Toluene	6.57E-12	NA	NA	NA	NA	NA	NA	6.61E-12
228	Trichlorobenzene	5.30E-14	NA	NA	NA	NA	NA	NA	5.30E-14
229	Trichloroethene	2.50E-07	2.91E-06	1.84E-14	3.12E-15	6.33E-10	8.13E-17	4.31E-10	3.17E-06
230	Unsym. dimethyl hydrazine	7.90E-13	5.91E-14	2.45E-18	3.95E-19	1.95E-15	5.97E-22	1.33E-15	8.52E-13
231	Vapona	4.48E-14	NA	NA	NA	NA	NA	NA	4.48E-14
232	Vinyl acetate	6.25E-13	NA	NA	NA	NA	NA	NA	6.25E-13
233	Vinyl chloride	1.81E-14	NA	NA	NA	NA	NA	NA	1.81E-14
234	Xylenes (total)								
235									
236	INORGANICS								
237	Arsenic	4.71E-08	2.10E-10	7.03E-11	3.73E-13	2.37E-11	1.10E-11	1.62E-11	4.74E-08
238	Cadmium	1.38E-09	1.64E-12	1.04E-13	1.25E-15	1.73E-13	NA	1.18E-13	1.38E-09
239	Chromium (III)	5.58E-10	NA	NA	NA	NA	NA	NA	5.58E-10
240	Chromium (VI)	1.96E-10	NA	NA	NA	NA	NA	NA	1.96E-10
241	Copper	7.18E-11	NA	NA	NA	NA	6.95E-14	NA	7.19E-11
242	Iron	2.15E-05	NA	NA	NA	NA	NA	NA	2.15E-05
243	Mercury	5.34E-09	3.63E-11	9.76E-13	1.55E-11	3.77E-12	NA	2.57E-12	5.40E-09
244	Selenium	5.78E-09	NA	NA	NA	NA	NA	NA	5.78E-09
245	Silver	7.19E-10	NA	NA	NA	NA	NA	NA	7.19E-10
246	Zinc	3.95E-10	NA	NA	NA	NA	2.92E-14	NA	3.95E-10
247									
248	Total (Hazard Index)	2.78E-05	2.07E-05	7.57E-11	1.62E-11	2.60E-09	1.11E-11	1.77E-09	4.85E-05

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

155 B	C	Z	AA	AB
156		TABLE 37		
157		INFANT HAZARD INDEX		
158				
159				
160				
161 RES-A				
162 SENSITIVITY CASE				
163				
164				
165				
166 ORGANICS				
167 Acetone		1.03E-14	3.24E-15	1.35E-14
168 Acetonitrile		1.69E-09	1.44E-09	3.13E-09
169 Acrylonitrile		1.64E-09	8.22E-11	1.72E-09
170 Aldrin		1.03E-13	2.91E-12	3.01E-12
171 Aniline		1.22E-10	1.37E-09	1.49E-09
172 Atrazine		1.15E-12	3.05E-12	4.20E-12
173 Benzaldehyde		4.33E-12	1.15E-11	1.59E-11
174 Benzene		1.67E-13	6.29E-15	1.73E-13
175 Benzofuran		4.21E-10	1.09E-09	1.52E-09
176 Benzoic Acid		5.30E-14	1.39E-13	1.92E-13
177 Benzonitrile		5.78E-10	1.53E-09	2.11E-09
178 Benzothiazole		1.97E-12	5.14E-12	7.11E-12
179 Biphenyl		1.59E-09	7.36E-13	1.59E-09
180 Bis(2-ethylhexyl)phthalate		2.28E-13	2.25E-12	2.48E-12
181 Carbazole		1.90E-12	4.89E-12	6.79E-12
182 Carbon Tetrachloride		8.72E-13	6.84E-13	1.56E-12
183 4-Chloroaniline		1.36E-13	3.55E-13	4.91E-13
184 Chlorobenzene		2.61E-13	1.13E-15	2.63E-13
185 4-Chlorobiphenyl		5.47E-14	1.39E-13	1.94E-13
186 4,4-Chlorobiphenyl		2.89E-15	7.37E-15	1.03E-14
187 Chloroethane		1.81E-14	NE	1.81E-14
188 Chloroform		4.68E-12	4.06E-13	5.09E-12
189 Dibenzofuran		NE	NE	NE
190 Dichlorobenzenes (total)		1.36E-13	1.05E-15	1.37E-13
191 1,1-Dichloroethane		1.56E-13	2.70E-15	1.58E-13
192 1,2-Dichloroethane		1.19E-13	2.94E-12	3.06E-12
193 1,1-Dichloroethene		4.08E-13	1.61E-14	4.24E-13
194 1,2-Dichloroethene		8.89E-15	6.25E-15	1.51E-14
195 1,2-Dichloropropane		8.71E-15	6.22E-15	1.49E-14
196 Dieldrin		1.89E-13	6.15E-12	6.34E-12
197 Dimethyldisulfide		1.63E-12	2.84E-14	1.66E-12
198 Hexachlorobenzene		1.59E-10	9.22E-11	2.51E-10
199 Hydrazine		1.24E-06	2.16E-05	2.29E-05
200 Lindane		4.39E-14	1.93E-13	2.36E-13
201 Malathion		6.48E-15	8.45E-15	1.49E-14
202 Methyl chloride		6.15E-14	6.23E-15	6.78E-14
203 Methylene chloride		4.55E-13	1.13E-13	5.68E-13
204 Methyl ethyl ketone		9.07E-14	6.16E-14	1.52E-13
205 4-Methylphenol		7.26E-13	4.03E-13	1.13E-12
206 Monomethyl hydrazine		2.67E-06	1.30E-05	1.56E-05
207 Naphthalene		1.71E-14	5.66E-13	5.84E-13
208 Naphthalene carbonitrile		9.07E-11	2.99E-09	3.09E-09
209 n-Nitrosodimethylamine		1.88E-10	6.51E-09	6.70E-09
210 PAHs				
211 Acenaphthalene		3.51E-12	9.10E-12	1.26E-11
212 Acenaphthene		3.51E-12	8.98E-12	1.25E-11
213 Benzo(a)pyrene		1.41E-11	3.60E-11	5.01E-11
214 Chrysene		1.41E-12	3.59E-12	5.00E-12

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155 B	C	Z	AA	AB
156		TABLE 37		
215	Dibenzo(a,h)anthracene	1.41E-11	3.61E-11	5.02E-11
216	Fluoranthene	1.06E-11	2.71E-11	3.76E-11
217	Fluorene	1.06E-12	2.71E-12	3.77E-12
218	Phenanthrene	5.48E-15	1.40E-14	1.95E-14
219	Pyrene	2.82E-11	7.21E-11	1.00E-10
220	Parathion	2.05E-12	4.47E-14	2.10E-12
221	Pentachlorobenzene	6.48E-11	3.80E-11	1.03E-10
222	Phenol	4.28E-14	4.09E-15	4.69E-14
223	Pyridine	2.84E-10	8.03E-11	3.64E-10
224	Quinoline	2.38E-13	6.35E-13	8.73E-13
225	Tetrachlorobenzene	8.50E-11	5.16E-11	1.37E-10
226	Tetrachloroethene	2.57E-15	1.55E-15	4.12E-15
227	Toluene	2.49E-14	2.09E-16	2.51E-14
228	Trichlorobenzene	4.30E-12	3.71E-13	4.67E-12
229	Trichloroethene	3.47E-14	2.24E-14	5.71E-14
230	Unsym. dimethyl hydrazine	1.68E-07	6.16E-06	6.32E-06
231	Vapona	5.17E-13	1.38E-12	1.90E-12
232	Vinyl acetate	2.93E-14	1.02E-16	2.94E-14
233	Vinyl chloride	4.09E-13	7.26E-14	4.82E-13
234	Xylenes (total)	1.18E-14	2.93E-19	1.18E-14
235				
236	INORGANICS			
237	Arsenic	3.08E-08	NE	3.08E-08
238	Cadmium	9.01E-10	NE	9.01E-10
239	Chromium (III)	3.65E-10	NE	3.65E-10
240	Chromium (VI)	1.28E-10	NE	1.28E-10
241	Copper	4.70E-11	NE	4.70E-11
242	Iron	1.41E-05	NE	1.41E-05
243	Mercury	3.49E-09	NE	3.49E-09
244	Selenium	3.78E-09	NE	3.78E-09
245	Silver	4.71E-10	NE	4.71E-10
246	Zinc	2.59E-10	NE	2.59E-10
247				
248	Total (Hazard Index)	1.82E-05	4.08E-05	5.90E-05

A	B	C	D
253	TABLE 38		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256			
257	RES-A		
258	SENSITIVITY CASE		
259			
260	Adult		
261	Inhalation		NA
262			
263	Ingestion		82.1174
264	Vegetables		82.1155
265	Milk		0.0001
266	Beef		0.0000
267	Soil\Dust		0.0018
268	Fish		0.0001
269			
270	Dermal		0.0013
271			
272	Child		
273	Inhalation		C.5283
274			
275	Ingestion		12.1035
276	Vegetables		12.1022
277	Milk		0.0000
278	Beef		0.0000
279	Soil\Dust		0.0012
280	Fish		0.0000
281			
282	Dermal		0.0008
283			
284	Infant		
285	Inhalation		0.3458
286			
287	Breast Milk Ingestion		4.9029
288			
290	Total		100.0000

A	B	C	AS	AT
98			TABLE 39	
99			ADULT INHALATION CARCINOGENIC RISK	
100			(These numbers are for sensitivity	
101			analysis)	
102				
103	RES-A		INHALATION	
104	SENSITIVITY CASE		ADULT	
105			CARC.	
106			RISK	
107				
108	ORGANICS			
109	Acrylonitrile		3.34E-14	
110	Aldrin		8.62E-18	
111	Aniline		1.05E-16	
112	Benzene		3.05E-18	
113	Bis(2-ethylhexyl)phthalate		3.15E-19	
114	Carbazole		3.67E-18	
115	Carbon Tetrachloride		6.93E-17	
116	Chloroform		3.67E-16	
117	1,4-Dichlorobenzene		1.60E-19	
118	1,1-Dichloroethane		NE	
119	1,2-Dichloroethane		8.55E-18	
120	1,1-Dichloroethene		1.93E-16	
121	1,2-Dichloropropane		4.05E-18	
122	Dieldrin		1.49E-17	
123	Hexachlorobenzene		3.94E-15	
124	Hydrazine		5.44E-11	
125	Lindane		5.62E-19	
126	Methyl chloride		7.87E-19	
127	Methylene chloride		1.06E-16	
128	4-Methylphenol		NE	
129	Monomethyl hydrazine		1.10E-12	
130	n-Nitrosodimethylamine		5.20E-14	
131	PAHs			
132	Benzo(a)pyrene		4.98E-14	
133	Chrysene		4.98E-15	
134	Dibenzo(a,h)anthracene		4.98E-14	
135	Parathion		NE	
136	Quinoline		1.10E-14	
137	Tetrachloroethene		5.68E-20	
138	Trichloroethene		2.02E-18	
139	Vapona		2.32E-18	
140	Vinyl chloride		3.10E-17	
141				
142	INORGANICS			
143	Arsenic		1.82E-12	
144	Cadmium		5.42E-15	
145	Chromium (VI)		5.19E-15	
146				
147	Total		5.75E-11	
148				
149				
150				
			INHALATION	2 YEARS
			EXPOSURE DURATION	

9.2 RESIDENT B SCENARIO

9.2.1 Base Case Emissions — Resident B

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 20-Jun-91

TABLE 1-A

A	B	C	D	E	F	G	H	I	J	K
BASE CASE	ER	AC	AVG. ANN. AMBIENT CONC.	DEPOSITION RATE	DEPOSITION RATE	DEPOSITION RATE	CO AVERAGE CALCULATED CONC IN SOIL	CO MAXIMUM CALCULATED CONC IN SOIL	CO AVERAGE CALCULATED CONC IN SOIL	CO MAXIMUM CALCULATED CONC IN SOIL
20-Jun-91 13:32:20 RES-B	EMISSION RATE g/sec	ug/M3	g/M2/yr	g/M2/yr	g/M2/yr	g/M2/yr	mg/Kg	mg/Kg	mg/Kg	mg/Kg
12 ORGANICS										
13 Acetone	1.26E-10	8.77E-12	NA	5.72E-10	2.91E-11	NA	3.96E-09	4.02E-09	7.92E-09	8.03E-09
14 Acetonitrile	1.14E-07	7.93E-09	NA	NA	NA	NA	NA	NA	NA	NA
15 Acrylonitrile	4.85E-08	3.38E-09	NA	8.89E-16	4.51E-17	NA	6.15E-15	6.24E-15	1.23E-14	1.25E-14
16 Aldrin	1.77E-13	1.23E-14	NA	3.22E-11	1.63E-12	NA	2.23E-10	2.26E-10	4.45E-10	4.52E-10
17 Aniline	6.41E-09	4.46E-10	NA	1.99E-13	1.01E-14	NA	1.38E-12	1.40E-12	2.75E-12	2.79E-12
18 Atrazine	3.96E-11	2.76E-12	NA	1.47E-11	7.45E-13	NA	1.01E-10	1.03E-10	2.03E-10	2.06E-10
19 Benzaldehyde	2.92E-09	2.03E-10	NA	NA	NA	NA	NA	NA	NA	NA
20 Benzene	3.67E-11	2.55E-12	NA	7.13E-11	3.62E-12	NA	4.93E-10	5.00E-10	9.86E-10	1.00E-09
21 Benzofuran	1.42E-08	9.88E-10	NA	7.18E-12	3.69E-13	NA	4.97E-11	5.04E-11	9.93E-11	1.01E-10
22 Benzoic Acid	1.43E-09	9.75E-11	NA	1.77E-10	7.96E-12	NA	1.08E-09	1.10E-09	2.17E-09	2.20E-09
23 Benzonitrile	3.12E-08	1.57E-09	NA	6.68E-14	3.39E-15	NA	4.62E-13	4.69E-13	9.24E-13	9.37E-13
24 Benzothiazole	1.33E-11	9.26E-13	NA	NA	NA	NA	NA	NA	NA	NA
25 Biphenyl	1.43E-08	9.95E-10	NA	3.94E-14	2.00E-15	NA	2.73E-13	2.77E-13	5.45E-13	5.53E-13
26 Bis(2-ethylhexyl)phthalate	7.85E-12	5.46E-13	NA	3.22E-13	1.63E-14	NA	2.23E-12	2.26E-12	4.45E-12	4.52E-12
27 Carbazole	6.41E-11	4.46E-12	NA	1.84E-14	9.36E-16	NA	1.27E-13	1.29E-13	2.55E-13	2.59E-13
28 Carbon Tetrachloride	1.86E-10	1.29E-11	NA	NA	NA	NA	NA	NA	NA	NA
29 4-Chloroaniline	3.67E-12	2.55E-13	NA	NA	NA	NA	NA	NA	NA	NA
30 Chlorobenzene	8.82E-12	6.14E-13	NA	4.54E-14	2.31E-15	NA	3.14E-13	3.18E-13	6.28E-13	6.37E-13
31 4-Chlorobiphenyl	9.04E-12	6.29E-13	NA	2.28E-15	1.16E-16	NA	1.58E-14	1.60E-14	3.16E-14	3.21E-14
32 4,4'-Chlorobiphenyl	4.55E-13	3.17E-14	NA	1.63E-12	8.26E-14	NA	1.13E-11	1.14E-11	2.25E-11	2.28E-11
33 Chloroethane	3.24E-10	2.26E-11	NA	1.63E-12	7.27E-14	NA	9.90E-12	1.00E-11	1.98E-11	2.01E-11
34 Chloroform	1.58E-09	1.10E-10	NA	1.43E-12	NA	NA	NA	NA	NA	NA
35 Dibenzofuran	2.85E-10	1.98E-11	NA	NA	NA	NA	NA	NA	NA	NA
36 Dichlorobenzenes (total)	3.67E-11	2.55E-12	NA	NA	NA	NA	NA	NA	NA	NA
37 1,4-Dichlorobenzene	2.32E-12	1.61E-13	NA	NA	NA	NA	NA	NA	NA	NA
38 1,1-Dichloroethane	1.05E-10	7.31E-12	NA	NA	NA	NA	NA	NA	NA	NA
39 1,2-Dichloroethane	3.28E-11	2.28E-12	NA	1.65E-13	8.36E-15	NA	1.14E-12	1.16E-12	2.28E-12	2.31E-12
40 1,1-Dichloroethene	5.62E-11	3.91E-12	NA	NA	NA	NA	NA	NA	NA	NA
41 1,2-Dichloroethene	4.86E-11	3.38E-12	NA	NA	NA	NA	NA	NA	NA	NA
42 1,2-Dichloropropane	2.08E-11	1.45E-12	NA	NA	NA	NA	NA	NA	NA	NA
43 Dieldrin	3.25E-13	2.26E-14	NA	1.63E-15	8.29E-17	NA	1.13E-14	1.14E-14	2.26E-14	2.29E-14
44 Dimethyldisulfide	8.93E-11	6.22E-12	NA	NA	NA	NA	NA	NA	NA	NA
45 Hexachlorobenzene	8.59E-10	5.98E-11	NA	4.31E-12	2.19E-13	NA	2.98E-11	3.03E-11	5.97E-11	6.05E-11
46 Hydrazine	1.11E-06	7.73E-08	NA	5.57E-09	2.83E-10	NA	3.85E-08	3.91E-08	7.71E-08	7.82E-08
47 Lindane	1.51E-13	1.05E-14	NA	7.58E-16	3.85E-17	NA	5.24E-15	5.32E-15	1.05E-14	1.06E-14
48 Malathion	4.46E-13	3.10E-14	NA	2.24E-15	1.14E-16	NA	1.55E-14	1.57E-14	3.10E-14	3.14E-14
49 Methyl chloride	4.36E-11	3.03E-12	NA	NA	NA	NA	NA	NA	NA	NA
50 Methylene chloride	2.63E-09	1.83E-10	NA	NA	NA	NA	NA	NA	NA	NA
51 Methyl ethyl ketone	5.51E-11	3.83E-12	NA	2.77E-13	1.41E-14	NA	1.91E-12	1.94E-12	3.83E-12	3.88E-12
52 4-Methylphenol	5.00E-11	3.48E-12	NA	2.51E-13	1.28E-14	NA	1.74E-12	1.76E-12	3.47E-12	3.52E-12
53 Monomethyl hydrazine	3.50E-07	2.44E-08	NA	1.76E-09	8.93E-11	NA	1.22E-08	1.23E-08	2.43E-08	2.47E-08
54 Naphthalene	5.90E-12	4.11E-13	NA	2.96E-14	1.50E-15	NA	2.05E-13	2.08E-13	4.10E-13	4.16E-13
55 Naphthalene carbonitrile	3.12E-08	2.17E-09	NA	1.57E-10	7.96E-12	NA	1.08E-09	1.10E-09	2.17E-09	2.20E-09
56 n-Nitrosodimethylamine	3.56E-10	2.48E-11	NA	1.79E-12	9.08E-14	NA	1.24E-11	1.25E-11	2.47E-11	2.51E-11
57 PAHs										
58 Acenaphthalene	1.42E-09	9.88E-11	NA	7.13E-12	3.62E-13	NA	4.93E-11	5.00E-11	9.86E-11	1.00E-10
59 Acenaphthene	1.42E-09	9.88E-11	NA	7.13E-12	3.62E-13	NA	4.93E-11	5.00E-11	9.86E-11	1.00E-10
60 Benzo(a)pyrene	2.85E-09	1.98E-10	NA	1.43E-11	7.27E-13	NA	9.90E-11	1.00E-10	1.98E-10	2.01E-10

TABLE 1-A										
A	B	C	D	E	F	G	H	I	J	K
2			2.85E-10	1.98E-11	1.43E-12	7.27E-14	9.90E-12	1.00E-11	1.98E-11	2.01E-11
61	Chrysene		2.85E-09	1.98E-10	1.43E-11	7.27E-13	9.90E-11	1.00E-10	1.98E-10	2.01E-10
62	Dibenzo(a,h)anthracene		2.85E-09	1.98E-10	1.43E-11	7.27E-13	9.90E-11	1.00E-10	1.98E-10	2.01E-10
63	Fluoranthene		2.85E-10	1.98E-11	1.43E-12	7.27E-14	9.90E-12	1.00E-11	1.98E-11	2.01E-11
64	Fluorene		1.11E-12	7.73E-14	5.57E-15	2.83E-16	3.85E-14	3.91E-14	7.71E-14	7.82E-14
65	Phenanthrene		5.70E-09	3.97E-10	2.86E-11	1.45E-12	1.98E-10	2.01E-10	3.96E-10	4.02E-10
66	Pyrene		7.06E-13	4.91E-14	3.54E-15	1.80E-16	2.45E-14	2.49E-14	4.90E-14	4.97E-14
67	Parathion		3.50E-10	2.44E-11	1.76E-12	8.92E-14	1.22E-11	1.23E-11	2.43E-11	2.47E-11
68	Pentachlorobenzene		5.60E-12	3.90E-13	2.81E-14	1.43E-15	1.94E-13	1.97E-13	3.89E-13	3.95E-13
69	Phenol		3.12E-08	2.17E-09	NA	NA	NA	NA	NA	NA
70	Pyridine		3.21E-10	2.23E-11	1.61E-12	8.19E-14	1.11E-11	1.13E-11	2.23E-11	2.26E-11
71	Quinoline		1.72E-10	1.20E-11	8.63E-13	4.39E-14	5.97E-12	6.06E-12	1.19E-11	1.21E-11
72	Tetrachlorobenzene		6.01E-12	4.18E-13	NA	NA	NA	NA	NA	NA
73	Tetrachloroethene		9.58E-11	6.67E-12	NA	NA	NA	NA	NA	NA
74	Toluene		8.71E-11	6.06E-12	4.37E-13	2.22E-14	3.02E-12	3.07E-12	6.05E-12	6.14E-12
75	Trichlorobenzene		6.41E-11	4.46E-12	NA	NA	NA	NA	NA	NA
76	Trichloroethene		1.38E-06	9.60E-08	6.93E-09	3.52E-10	4.79E-08	4.86E-08	9.58E-08	9.72E-08
77	Unsym. dimethyl hydrazine		2.79E-12	1.94E-13	1.40E-14	7.11E-16	9.69E-14	9.83E-14	1.94E-13	1.97E-13
78	Vapona		3.95E-11	2.76E-12	NA	NA	NA	NA	NA	NA
79	Vinyl acetate		3.67E-11	2.55E-12	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		6.84E-12	4.76E-13	NA	NA	NA	NA	NA	NA
81	Xylenes (total)									
82										
83	INORGANICS									
84	Arsenic		3.76E-08	2.62E-09	1.89E-10	9.59E-12	1.31E-09	1.32E-09	2.61E-09	2.65E-09
85	Cadmium		2.18E-10	1.52E-11	1.09E-12	5.56E-14	7.57E-12	7.68E-12	1.51E-11	1.54E-11
86	Chromium (III)		9.66E-10	6.72E-11	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		3.40E-11	2.37E-12	NA	NA	NA	NA	NA	NA
88	Copper		1.43E-09	9.95E-11	NA	NA	NA	NA	NA	NA
89	Iron		3.47E-05	2.42E-06	NA	NA	NA	NA	NA	NA
90	Lead		1.41E-09	9.81E-11	7.08E-12	3.60E-13	4.90E-11	4.97E-11	9.79E-11	9.93E-11
91	Mercury		1.41E-09	9.81E-11	7.08E-12	3.60E-13	4.90E-11	4.97E-11	9.79E-11	9.93E-11
92	Selenium		4.27E-09	2.97E-10	NA	NA	NA	NA	NA	NA
93	Silver		1.95E-11	1.36E-12	NA	NA	NA	NA	NA	NA
94	Zinc		1.12E-08	7.80E-10	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 Yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
6.96E-02 INHALATION DFI
Deposition Dry DF
2.55E-04 DDF
5.02E-03 DRY/WET TDF

CO =
D*AT*1000

SD*BD
AC = ER * DFI
D = ER * X DF

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 20-Jun-91

A	B	C	M	N	O	P	Q	R
2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37
38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55
56	57	58	59	60				
BASE CASE	TABLE 1-B CATTLE FEED D	20-Jun-91 13:34:53 RES-B	TOTAL DEPOSITION RATE g/M2/YR	DRY DEPOSITION RATE g/M2/YR	CO AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	CO AVERAGE CALCULATED CONC IN SOIL .1M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .1M mg/Kg
ORGANICS								
Acetone	NA	3.42E-10	NA	5.76E-11	2.37E-09	2.40E-09	4.73E-09	4.80E-09
Acetonitrile	NA	NA	NA	NA	NA	NA	NA	NA
Acrylonitrile	NA	5.31E-16	8.94E-17	3.67E-15	3.67E-15	3.73E-15	7.35E-15	7.45E-15
Aldrin	1.92E-11	1.92E-11	3.24E-12	1.33E-10	1.33E-10	1.35E-10	2.66E-10	2.70E-10
Aniline	1.19E-13	1.19E-13	2.00E-14	8.22E-13	8.22E-13	8.34E-13	1.64E-12	1.67E-12
Atrazine	8.76E-12	8.76E-12	1.47E-12	6.06E-11	6.06E-11	6.15E-11	1.21E-10	1.23E-10
Benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	4.26E-11	4.26E-11	7.17E-12	2.95E-10	2.95E-10	2.99E-10	5.89E-10	5.98E-10
Benzofuran	4.29E-12	4.29E-12	7.22E-13	2.97E-11	2.97E-11	3.01E-11	5.94E-11	6.02E-11
Benzoic Acid	9.36E-11	9.36E-11	1.58E-11	6.47E-10	6.47E-10	6.57E-10	1.29E-09	1.31E-09
Benzonitrile	3.99E-14	3.99E-14	6.72E-15	2.76E-13	2.76E-13	2.80E-13	5.52E-13	5.60E-13
Benzothiazole	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	2.36E-14	2.36E-14	3.96E-15	1.63E-13	1.63E-13	1.65E-13	3.26E-13	3.31E-13
Bis(2-ethylhexyl)phthalate	1.92E-13	1.92E-13	3.24E-14	1.33E-12	1.33E-12	1.35E-12	2.66E-12	2.70E-12
Carbazole	1.10E-14	1.10E-14	1.85E-15	7.62E-14	7.62E-14	7.73E-14	1.52E-13	1.55E-13
Carbon Tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	2.71E-14	2.71E-14	4.57E-15	1.88E-13	1.88E-13	1.90E-13	3.75E-13	3.81E-13
Chlorobenzene	1.36E-15	1.36E-15	2.30E-16	9.44E-15	9.44E-15	9.58E-15	1.89E-14	1.92E-14
4-Chlorobiphenyl	9.72E-13	9.72E-13	1.64E-13	6.72E-12	6.72E-12	6.82E-12	1.34E-11	1.36E-11
Chloroethane	8.55E-13	8.55E-13	1.44E-13	5.91E-12	5.91E-12	6.00E-12	1.18E-11	1.20E-11
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorobenzenes (total)	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	9.84E-14	9.84E-14	1.66E-14	6.81E-13	6.81E-13	6.91E-13	1.36E-12	1.38E-12
1,2-Dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	9.75E-16	9.75E-16	1.64E-16	6.74E-15	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Dieldrin	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyldisulfide	2.58E-12	2.58E-12	4.34E-13	1.78E-11	1.78E-11	1.81E-11	3.57E-11	3.62E-11
Hexachlorobenzene	3.33E-09	3.33E-09	5.61E-10	2.30E-08	2.30E-08	2.34E-08	4.61E-08	4.67E-08
Hydrazine	4.53E-16	4.53E-16	7.63E-17	3.13E-15	3.13E-15	3.18E-15	6.27E-15	6.36E-15
Lindane	1.34E-15	1.34E-15	2.25E-16	9.26E-15	9.26E-15	9.39E-15	1.85E-14	1.88E-14
Malathion	NA	NA	NA	NA	NA	NA	NA	NA
Methyl chloride	1.65E-13	1.65E-13	2.78E-14	1.14E-12	1.14E-12	1.16E-12	2.29E-12	2.32E-12
Methylene chloride	1.50E-13	1.50E-13	2.53E-14	1.04E-12	1.04E-12	1.05E-12	2.08E-12	2.11E-12
4-Methylphenol	1.03E-09	1.03E-09	1.77E-10	7.26E-09	7.26E-09	7.37E-09	1.45E-08	1.47E-08
Monomethyl hydrazine	1.77E-14	1.77E-14	2.98E-15	1.22E-13	1.22E-13	1.24E-13	2.45E-13	2.48E-13
Naphthalene	9.36E-11	9.36E-11	1.58E-11	6.47E-10	6.47E-10	6.57E-10	1.29E-09	1.31E-09
Naphthalene carbonitrile	1.07E-12	1.07E-12	1.80E-13	7.49E-12	7.49E-12	7.69E-12	1.48E-11	1.50E-11
n-Nitrosodimethylamine	NA	NA	NA	NA	NA	NA	NA	NA
PAHs								
Acenaphthalene	4.26E-12	4.26E-12	7.17E-13	2.95E-11	2.95E-11	2.99E-11	5.89E-11	5.98E-11
Acenaphthene	4.26E-12	4.26E-12	7.17E-13	2.95E-11	2.95E-11	2.99E-11	5.89E-11	5.98E-11
Benzo(a)pyrene	8.55E-12	8.55E-12	1.44E-12	5.91E-11	5.91E-11	6.00E-11	1.18E-10	1.20E-10

A	B	C	TABLE 1-B	N	O	P	Q	R
2								
61	Chrysene		8.53E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		8.53E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		8.53E-12	1.44E-11	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Fluorene		8.53E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		1.03E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		NA	NA	NA	NA	NA	NA
71	Quinoline		9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		NA	NA	NA	NA	NA	NA
74	Toluene		NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		NA	NA	NA	NA	NA	NA
80	Vinyl chloride		NA	NA	NA	NA	NA	NA
81	Xylenes (total)		NA	NA	NA	NA	NA	NA
82								
83	INORGANICS							
84	Arsenic		1.13E-10	1.90E-11	7.80E-10	7.92E-10	1.56E-09	1.58E-09
85	Cadmium		6.54E-13	1.10E-13	4.52E-12	4.59E-12	9.05E-12	9.18E-12
86	Chromium (III)		NA	NA	NA	NA	NA	NA
87	Chromium (VI)		NA	NA	NA	NA	NA	NA
88	Copper		NA	NA	NA	NA	NA	NA
89	Iron		NA	NA	NA	NA	NA	NA
90	Lead		4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
91	Mercury		4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
92	Selenium		NA	NA	NA	NA	NA	NA
93	Silver		NA	NA	NA	NA	NA	NA
94	Zinc		NA	NA	NA	NA	NA	NA
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								

2.0 YRS ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/NET TDF

D*AT*1000

SD*BD
D = ER * x DF

A	B	C	T	U	V	W	X	Y	Z	AA
2	3		TABLE 2							
4	5	BASE CASE	ADULT TOTAL EXPOSURE - AVERAGE							
6	7		18-Jun-91							
8	9		14:39:20							
10	11	RES-B								
12	13	ORGANICS	INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
14	15	Acetone	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	CONSUMPTION	EXPOSURE	(mg/Kg/day)
16	17	Acetonitrile	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)
18	19	Acrylonitrile	2.51E-15	1.92E-11	2.37E-18	9.30E-19	1.13E-14	7.76E-21	4.16E-15	2.51E-15
20	21	Aldrin	2.27E-12	NA	NA	NA	NA	NA	NA	2.15E-11
22	23	Aniline	9.64E-13	6.59E-18	4.78E-20	7.19E-21	1.76E-20	2.81E-27	6.46E-21	9.64E-13
24	25	Atrazine	3.52E-18	1.16E-13	4.43E-19	1.73E-19	6.36E-16	2.33E-19	2.34E-16	1.02E-17
26	27	Benzaldehyde	1.27E-13	1.82E-16	1.54E-20	6.01E-21	3.93E-18	0.00E+00	1.45E-18	2.44E-13
28	29	Benzene	7.87E-16	2.58E-14	3.54E-19	1.38E-19	2.90E-16	2.51E-20	1.07E-16	9.75E-16
30	31	Benzofuran	5.81E-14	NA	NA	NA	NA	NA	NA	8.42E-14
32	33	Benzoic Acid	7.30E-16	6.59E-14	5.49E-18	2.13E-18	1.41E-15	5.53E-19	5.18E-16	7.30E-16
34	35	Benzoic Acid	2.82E-13	8.12E-15	2.53E-19	9.89E-20	1.42E-16	2.20E-20	5.22E-17	3.50E-13
36	37	Benzonitrile	2.84E-14	2.50E-13	4.08E-18	1.60E-18	3.10E-15	2.99E-19	5.22E-17	3.67E-14
38	39	Benzothiazole	6.20E-13	6.54E-17	2.70E-21	1.05E-21	1.32E-18	2.51E-24	1.4E-15	8.75E-13
40	41	Biphenyl	2.84E-16	NA	NA	NA	NA	NA	4.85E-19	3.32E-16
42	43	Bis(2-ethylhexyl)phthalate	2.84E-13	2.22E-16	4.02E-17	4.79E-18	7.79E-19	3.25E-24	2.86E-19	2.84E-13
44	45	Carbazole	1.56E-16	1.82E-16	4.58E-20	1.76E-20	6.36E-18	3.31E-21	2.34E-18	4.24E-16
46	47	Carbon Tetrachloride	1.27E-15	NA	NA	NA	NA	NA	NA	1.47E-15
48	49	4-Chloroaniline	3.70E-15	1.98E-17	6.24E-22	2.44E-22	3.64E-19	9.45E-22	1.34E-19	3.70E-15
50	51	Chlorobenzene	7.30E-17	NA	NA	NA	NA	NA	NA	9.33E-17
52	53	4-Chlorobiphenyl	1.75E-16	1.08E-17	3.65E-20	1.24E-20	8.97E-19	3.39E-22	3.30E-19	1.75E-16
54	55	4,4'-Dichlorobiphenyl	1.80E-16	4.06E-19	4.50E-21	1.32E-21	4.51E-20	5.71E-24	1.66E-20	1.92E-16
56	57	Chloroethane	9.05E-18	2.87E-15	3.96E-20	1.55E-20	3.21E-17	1.91E-23	1.18E-17	9.52E-18
58	59	Chloroform	6.44E-15	NA	NA	NA	NA	NA	NA	9.36E-15
60	61	Dibenzofuran	3.14E-14	4.94E-16	4.77E-19	1.77E-19	2.83E-17	2.19E-20	1.04E-17	3.14E-14
62	63	Dichlorobenzenes (total)	5.67E-15	NA	NA	NA	NA	NA	NA	6.20E-15
64	65	1,4-Dichlorobenzene	7.30E-16	NA	NA	NA	NA	NA	NA	7.30E-16
66	67	1,2-Dichloroethane	4.61E-17	NA	NA	NA	NA	NA	NA	4.61E-17
68	69	1,2-Dichloroethane	2.09E-15	NA	NA	NA	NA	NA	NA	2.09E-15
70	71	1,2-Dichloroethane	6.52E-16	9.13E-16	3.97E-21	1.56E-21	3.25E-18	5.73E-23	1.20E-18	1.57E-15
72	73	1,2-Dichloroethane	1.12E-15	NA	NA	NA	NA	NA	NA	1.12E-15
74	75	1,2-Dichloroethane	9.66E-16	NA	NA	NA	NA	NA	NA	9.66E-16
76	77	1,2-Dichloropropane	4.14E-16	NA	NA	NA	NA	NA	NA	4.14E-16
78	79	Dieldrin	6.46E-18	8.14E-17	8.55E-21	2.01E-21	3.22E-20	1.08E-24	1.19E-20	8.79E-17
80	81	Dimethylsulfide	1.78E-15	NA	NA	NA	NA	NA	NA	1.78E-15
82	83	Hexachlorobenzene	1.71E-14	2.05E-15	7.27E-18	2.19E-18	8.52E-17	4.30E-19	3.13E-17	1.78E-15
84	85	Hydrazine	2.21E-11	5.53E-09	1.63E-18	6.40E-19	1.10E-13	3.52E-20	4.05E-14	1.93E-14
86	87	Lindane	3.00E-18	4.98E-19	1.09E-22	4.19E-23	1.50E-20	4.73E-26	5.51E-21	5.55E-09
88	89	Malathion	8.87E-18	8.19E-19	2.14E-22	8.30E-23	4.42E-20	0.00E+00	1.63E-20	3.52E-18
90	91	Methyl chloride	8.67E-16	NA	NA	NA	NA	NA	NA	9.75E-18
92	93	Methylene chloride	5.23E-14	NA	NA	NA	NA	NA	NA	8.67E-16
94	95	Methyl ethyl ketone	1.10E-15	4.45E-15	2.05E-21	8.03E-22	5.47E-18	0.00E+00	2.01E-18	5.23E-14
96	97	4-Methylphenol	9.94E-16	6.13E-16	9.47E-19	3.70E-21	4.96E-18	2.71E-23	1.82E-18	5.56E-15
98	99	Monomethyl hydrazine	6.96E-12	1.20E-09	5.14E-21	2.02E-19	3.47E-14	1.12E-20	1.28E-14	1.61E-15
100	101	Naphthalene	1.17E-16	2.32E-17	4.47E-21	1.72E-21	5.85E-19	1.48E-19	2.15E-19	1.20E-09
102	103	Naphthalene carbonitrile	6.20E-13	1.22E-13	2.37E-17	9.09E-18	3.10E-15	3.42E-18	1.14E-15	1.41E-16
104	105	n-Nitrosodimethylamine	7.08E-15	7.43E-13	5.33E-21	2.09E-21	3.53E-17	0.00E+00	1.30E-17	7.47E-13
106	107	PAHs								7.51E-13
108	109	Acenaphthalene	2.82E-14	5.97E-15	2.26E-18	8.41E-19	1.41E-16	1.05E-19	5.18E-17	3.44E-14
110	111	Acenaphthene	2.82E-14	7.26E-15	1.93E-18	7.25E-19	1.41E-16	4.07E-20	5.18E-17	3.12E-14
112	113	Benzo(a)pyrene	5.67E-14	3.90E-16	1.10E-16	2.38E-17	2.83E-16	1.40E-19	1.04E-16	5.76E-14

TABLE 2									
A	B	C	T	U	V	W	X	Y	Z
61	Chrysene		5.67E-15	3.03E-16	3.85E-18	1.06E-18	2.83E-17	3.55E-19	1.04E-17
62	Dibenzo(a,h)anthracene		5.67E-14	6.87E-16	1.28E-16	2.67E-17	2.83E-16	7.95E-17	1.04E-16
63	Fluoranthene		5.67E-14	5.80E-15	1.72E-17	5.52E-18	2.83E-16	NA	1.04E-16
64	Fluorene		5.67E-15	7.11E-16	6.32E-19	2.30E-19	2.83E-17	2.92E-20	1.04E-17
65	Phenanthrene		2.21E-17	2.03E-18	3.05E-21	1.09E-21	1.10E-19	1.01E-19	4.05E-20
66	Pyrene		1.13E-13	1.08E-14	3.27E-17	1.06E-17	5.66E-16	1.60E-18	2.08E-16
67	Parathion		1.40E-17	1.45E-18	8.54E-22	3.23E-22	7.00E-20	3.17E-25	2.58E-20
68	Pentachlorobenzene		6.96E-15	1.60E-15	1.77E-18	5.83E-19	3.47E-17	NA	1.28E-17
69	Phenol		1.11E-16	1.56E-16	6.65E-22	2.60E-22	5.56E-19	NA	2.04E-19
70	Pyridine		6.20E-13	NA	NA	NA	NA	NA	NA
71	Quinoline		6.38E-15	2.92E-15	6.63E-20	2.59E-20	3.18E-17	6.35E-21	1.17E-17
72	Tetrachlorobenzene		3.42E-15	1.83E-15	3.77E-19	1.38E-19	1.71E-17	NA	6.28E-18
73	Tetrachloroethene		1.20E-16	NA	NA	NA	NA	NA	NA
74	Toluene		1.91E-15	NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		1.73E-15	1.03E-16	1.26E-19	4.72E-20	8.64E-18	9.59E-21	3.18E-18
76	Trichloroethene		1.27E-15	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		2.74E-11	3.08E-09	3.84E-18	1.51E-18	1.37E-13	4.39E-20	5.04E-14
78	Vapona		5.55E-17	2.71E-17	3.13E-22	1.22E-22	2.77E-19	2.12E-25	1.02E-19
79	Vinyl acetate		7.87E-16	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		7.30E-16	NA	NA	NA	NA	NA	NA
81	Xylenes (total)		1.36E-16	NA	NA	NA	NA	NA	NA
82									
83	INORGANICS								
84	Arsenic		7.48E-13	1.10E-15	2.02E-15	2.65E-17	3.73E-15	4.36E-15	1.37E-16
85	Cadmium		4.34E-15	7.27E-17	4.18E-18	1.83E-19	2.16E-17	NA	7.96E-19
86	Chromium (III)		1.92E-14	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		6.76E-16	NA	NA	NA	NA	NA	NA
88	Copper		2.84E-14	NA	NA	NA	NA	5.29E-16	NA
89	Iron		6.90E-10	NA	NA	NA	NA	NA	NA
90	Lead		2.80E-14	NA	NA	NA	NA	NA	NA
91	Mercury		2.80E-14	6.61E-16	1.06E-17	7.98E-16	1.40E-16	NA	5.15E-18
92	Selenium		8.49E-14	NA	NA	NA	NA	NA	NA
93	Silver		3.88E-16	NA	NA	NA	NA	NA	NA
94	Zinc		2.23E-13	NA	NA	NA	NA	2.03E-15	NA
95									
96									
97									
98									
99									
100									
101									
102									
103									
104									

br 20 M3/day D*AT*1000
 bw 70 Kg
 ef 365 days/yr SD*BD
 cf 365000 (1000 ug/mg)*(365 day/yr) AC = ER * DF1
 Inhalation dose = Cair*br*ef/bw/cf D = ER * X DF

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2	3		TABLE 3							
4	5	BASE CASE	ADULT TOTAL EXPOSURE - MAXIMUM							
6	7		18-Jun-91							
8	9		14:39:20							
10	11	RES-B								
12	13	ORGANICS	INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
14	15	Acetone	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	CONSUMPTION	EXPOSURE	EXPOSURE
16	17	Acetonitrile	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)
18	19	Acrylonitrile	2.51E-15	1.95E-11	NA	NA	NA	NA	NA	2.51E-15
20	21	Aldrin	2.27E-12	NA	2.42E-18	9.45E-19	1.15E-14	7.76E-21	4.22E-15	2.18E-11
22	23	Aniline	3.52E-13	6.76E-18	1.45E-18	NA	NA	NA	NA	9.64E-13
24	25	Atrazine	1.27E-13	1.20E-13	4.65E-19	1.78E-19	1.78E-20	2.81E-27	6.55E-21	1.19E-17
26	27	Benzaldehyde	7.87E-16	2.02E-16	2.16E-20	6.77E-21	6.45E-16	2.33E-19	2.37E-16	2.49E-13
28	29	Benzene	5.81E-14	2.74E-14	3.87E-19	1.44E-19	3.99E-18	0.00E+00	1.47E-18	9.95E-16
30	31	Benzofuran	7.30E-16	NA	NA	NA	2.94E-16	2.51E-20	1.08E-16	8.59E-14
32	33	Benzoic Acid	2.82E-13	7.32E-14	7.66E-18	2.40E-18	1.43E-15	5.53E-19	5.26E-16	7.30E-16
34	35	Benzonitrile	2.84E-14	8.88E-15	2.90E-19	1.04E-19	1.44E-16	2.20E-20	5.26E-16	3.58E-13
36	37	Benzothiazole	6.20E-13	4.50E-13	4.50E-19	1.66E-18	3.14E-15	2.99E-19	1.26E-15	3.75E-14
38	39	Biphenyl	2.64E-16	7.23E-17	3.16E-21	1.12E-21	1.34E-18	2.51E-24	4.92E-19	8.93E-13
40	41	Bis(2-ethylhexyl)phthalate	2.84E-13	NA	NA	NA	NA	NA	NA	3.39E-16
42	43	Carbazole	1.56E-16	2.29E-16	1.37E-15	1.54E-16	7.90E-19	3.25E-24	2.91E-19	2.84E-13
44	45	Carbon Tetrachloride	1.27E-15	2.13E-16	8.58E-20	2.23E-20	6.45E-18	3.51E-21	2.37E-18	1.91E-15
46	47	4-Chloroaniline	3.70E-15	NA	NA	NA	NA	NA	NA	1.50E-15
48	49	Chlorobenzene	7.30E-17	2.18E-17	7.12E-22	2.57E-22	3.69E-19	9.45E-22	1.36E-19	3.70E-15
50	51	4-Chlorobiphenyl	1.75E-16	NA	NA	NA	NA	NA	NA	9.53E-17
52	53	4,4'-Chlorobiphenyl	1.80E-16	1.50E-17	2.63E-19	3.80E-20	9.10E-19	3.39E-22	3.35E-19	1.75E-16
54	55	Chloroethane	9.05E-18	6.17E-19	5.91E-20	7.45E-21	4.58E-20	5.71E-24	1.68E-20	1.96E-16
56	57	Chloroform	6.44E-15	3.06E-15	4.34E-20	1.61E-20	3.26E-17	1.91E-23	1.20E-17	9.79E-18
58	59	Dibenzofuran	3.14E-14	NA	NA	NA	NA	NA	NA	9.55E-15
60	61	Dichlorobenzenes (total)	5.67E-15	6.29E-16	1.67E-18	3.13E-19	2.87E-17	2.19E-20	1.06E-17	3.14E-14
62	63	1,4-Dichlorobenzene	7.30E-16	NA	NA	NA	NA	NA	NA	6.34E-15
64	65	1,2-Dichloroethane	4.61E-17	NA	NA	NA	NA	NA	NA	7.30E-16
66	67	1,1-Dichloroethane	2.09E-15	NA	NA	NA	NA	NA	NA	4.61E-17
68	69	1,2-Dichloroethene	6.52E-16	9.41E-16	4.34E-21	1.61E-21	3.30E-18	5.73E-23	1.21E-18	2.09E-15
70	71	1,2-Dichloropropane	1.12E-15	NA	NA	NA	NA	NA	NA	1.60E-15
72	73	Dieldrin	9.66E-16	NA	NA	NA	NA	NA	NA	1.12E-15
74	75	Dimethyldisulfide	4.14E-16	8.27E-17	1.71E-19	2.02E-20	3.27E-20	1.08E-24	1.20E-20	9.66E-16
76	77	Hexachlorobenzene	6.46E-18	NA	NA	NA	NA	NA	NA	4.14E-16
78	79	Hydrazine	1.78E-15	2.46E-15	8.73E-17	1.12E-17	8.65E-17	4.30E-19	3.18E-17	8.94E-17
80	81	Lindane	2.21E-11	5.61E-09	1.65E-18	6.49E-19	1.12E-13	3.52E-20	4.11E-14	1.78E-15
82	83	Malathion	3.00E-18	5.74E-19	2.05E-22	5.32E-23	1.52E-20	4.73E-26	5.59E-21	1.98E-14
84	85	Methyl chloride	8.87E-18	1.03E-18	3.26E-22	9.64E-23	4.49E-20	0.00E+00	1.65E-20	5.63E-09
86	87	Methylene chloride	8.67E-16	NA	NA	NA	NA	NA	NA	3.60E-18
88	89	Methyl ethyl ketone	5.23E-14	4.54E-15	2.11E-21	8.18E-22	5.55E-18	0.00E+00	2.04E-18	9.94E-18
90	91	4-Methylphenol	1.10E-15	6.44E-16	1.10E-20	3.91E-21	5.03E-18	2.71E-23	1.85E-18	5.23E-14
92	93	Monomethyl hydrazine	9.94E-16	1.22E-09	5.22E-19	2.05E-19	3.52E-14	1.12E-20	1.30E-14	5.65E-15
94	95	Naphthalene	6.96E-12	2.61E-17	8.70E-21	2.21E-21	5.94E-19	1.48E-19	2.18E-19	1.65E-15
96	97	Naphthalene carbonitrile	1.17E-16	2.61E-17	8.70E-21	2.21E-21	5.94E-19	1.48E-19	2.18E-19	1.22E-09
98	99	n-Nitrosodimethylamine	6.20E-13	1.38E-13	4.60E-17	1.17E-17	3.14E-15	3.42E-18	1.16E-15	1.44E-16
100	101	PAHs	7.08E-15	7.54E-13	5.43E-21	2.12E-21	3.58E-17	0.00E+00	1.32E-17	7.63E-13
102	103	Acenaphthalene	2.82E-14	6.70E-15	7.55E-18	1.44E-18	1.43E-16	1.05E-19	5.26E-17	3.51E-14
104	105	Acenaphthene	2.82E-14	3.44E-15	5.68E-18	1.15E-18	1.43E-16	4.07E-20	5.26E-17	3.19E-14
106	107	Benzo(a)pyrene	5.67E-14	1.68E-15	2.47E-15	2.89E-16	2.87E-16	1.40E-19	1.06E-16	6.15E-14

TABLE 3										
A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
61	Chrysene		5.67E-15	4.36E-16	5.93E-17	7.28E-18	2.87E-17	3.55E-19	1.06E-17	6.21E-15
62	Dibenzo(a,h)anthracene		5.67E-14	1.98E-15	2.97E-15	3.45E-16	2.87E-16	7.95E-17	1.06E-16	6.24E-14
63	Fluoranthene		5.67E-14	7.17E-15	1.67E-16	2.23E-17	2.87E-16	NA	1.06E-16	6.44E-14
64	Fluorene		5.67E-15	8.50E-16	2.80E-18	4.75E-19	2.87E-17	2.92E-20	1.06E-17	6.56E-15
65	Phenanthrene		2.21E-17	2.56E-18	1.61E-20	2.56E-21	1.12E-19	1.01E-19	4.11E-20	2.49E-17
66	Pyrene		1.13E-13	1.36E-14	3.05E-16	4.12E-17	5.74E-16	1.60E-18	2.11E-16	1.28E-13
67	Parathion		1.40E-17	1.79E-18	2.30E-21	4.89E-22	7.11E-20	3.17E-25	2.61E-20	1.59E-17
68	Pentachlorobenzene		6.96E-15	1.78E-15	1.51E-17	2.08E-18	3.52E-17	NA	1.30E-17	8.81E-15
69	Phenol		1.11E-16	1.60E-16	7.26E-22	2.70E-22	5.64E-19	NA	2.07E-19	2.72E-16
70	Pyridine		6.20E-13	NA	NA	NA	NA	NA	NA	6.20E-13
71	quinoline		6.38E-15	3.10E-15	7.82E-20	2.75E-20	3.23E-17	6.35E-21	1.19E-17	9.53E-15
72	Tetrachlorobenzene		3.42E-15	1.94E-15	1.65E-18	2.82E-19	1.73E-17	NA	6.37E-18	5.38E-15
73	Tetrachloroethene		1.20E-16	NA	NA	NA	NA	NA	NA	1.20E-16
74	Toluene		1.91E-15	NA	NA	NA	NA	NA	NA	1.91E-15
75	Trichlorobenzene		1.73E-15	1.44E-16	3.90E-19	7.72E-20	8.77E-18	9.59E-21	3.22E-18	1.89E-15
76	Trichloroethene		1.27E-15	NA	NA	NA	NA	NA	NA	1.27E-15
77	Unsym. dimethyl hydrazine		2.74E-11	3.12E-09	3.90E-18	1.53E-18	1.39E-13	4.39E-20	5.11E-14	3.15E-09
78	Vapona		5.55E-17	2.87E-17	3.39E-22	1.27E-22	2.81E-19	2.12E-25	1.03E-19	8.46E-17
79	Vinyl acetate		7.87E-16	NA	NA	NA	NA	NA	NA	7.87E-16
80	Vinyl chloride		7.30E-16	NA	NA	NA	NA	NA	NA	7.30E-16
81	Xylenes (total)		1.36E-16	NA	NA	NA	NA	NA	NA	1.36E-16
82										
83	INORGANICS									
84	Arsenic		7.48E-13	1.80E-14	1.08E-14	1.33E-16	3.78E-15	4.36E-15	1.39E-16	7.85E-13
85	Cadmium		4.34E-15	1.72E-16	1.27E-17	3.54E-19	2.19E-17	NA	8.07E-19	4.54E-15
86	Chromium (III)		1.92E-14	NA	NA	NA	NA	NA	NA	1.92E-14
87	Chromium (VI)		6.76E-16	NA	NA	NA	NA	NA	NA	6.76E-16
88	Copper		2.84E-14	NA	NA	NA	NA	5.29E-16	NA	2.90E-14
89	Iron		6.90E-10	NA	NA	NA	NA	NA	NA	6.90E-10
90	Lead		2.80E-14	NA	NA	NA	NA	NA	NA	2.80E-14
91	Mercury		2.80E-14	1.30E-15	3.54E-17	1.31E-15	1.42E-16	NA	5.22E-18	3.08E-14
92	Selenium		8.49E-14	NA	NA	NA	NA	NA	NA	8.49E-14
93	Silver		3.88E-16	NA	NA	NA	NA	NA	NA	3.88E-16
94	Zinc		2.23E-13	NA	NA	NA	NA	2.03E-15	NA	2.25E-13

br 20 M3/day
 bw 70 Kg
 ef 365 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
3			CHILD TOTAL EXPOSURE - AVERAGE							
4										
5		BASE CASE								
6										
7										
8										
9										
10										
11										
12		ORGANICS								
13		Acetone	5.66E-15	NA	1.37E-17	NA	NA	1.75E-20	NA	5.66E-15
14		Acetonitrile	5.12E-12	3.42E-11	1.37E-17	2.32E-18	1.02E-13	1.75E-20	3.48E-14	3.95E-11
15		Acrylonitrile	2.18E-12	NA	NA	NA	NA	NA	NA	2.18E-12
16		Aldrin	7.95E-18	9.87E-18	2.76E-19	1.79E-20	1.59E-19	6.34E-27	5.40E-20	1.83E-17
17		Aniline	2.88E-13	2.33E-13	2.56E-18	4.33E-19	5.74E-15	5.27E-19	1.96E-15	5.28E-13
18		Atrazine	1.78E-15	3.07E-16	8.92E-20	1.50E-20	3.55E-17	0.00E+00	1.21E-17	2.13E-15
19		Benzaldehyde	1.31E-13	5.10E-14	2.04E-18	3.45E-19	2.62E-15	5.67E-20	8.91E-16	1.86E-13
20		Benzene	1.65E-15	NA	NA	NA	NA	NA	NA	1.65E-15
21		Benzofuran	6.38E-13	1.11E-13	3.17E-17	5.32E-18	1.27E-14	1.25E-18	4.33E-15	7.66E-13
22		Benzoic Acid	6.42E-14	1.58E-14	1.46E-17	2.47E-19	1.28E-15	4.96E-20	4.36E-16	8.17E-14
23		Benzonitrile	1.40E-12	4.95E-13	2.36E-17	3.99E-18	2.80E-14	6.74E-19	9.52E-15	1.93E-12
24		Benzothiazole	5.97E-16	1.26E-16	1.56E-20	2.63E-21	1.19E-17	5.67E-24	4.06E-18	7.39E-16
25		Biphenyl	6.42E-13	NA	NA	NA	NA	NA	NA	6.42E-13
26		Bis(2-ethylhexyl)phthalate	3.52E-16	3.32E-16	2.32E-16	1.20E-17	7.03E-18	7.34E-24	2.40E-18	9.38E-16
27		Carbazole	2.88E-15	2.97E-16	2.64E-19	4.39E-20	5.74E-17	7.46E-21	1.96E-17	3.25E-15
28		Carbon Tetrachloride	8.35E-15	NA	NA	NA	NA	NA	NA	8.35E-15
29		4-Chloroaniline	1.65E-16	3.95E-17	3.61E-21	6.09E-22	3.29E-18	2.13E-21	1.12E-18	2.09E-16
30		Chlorobenzene	3.96E-16	NA	NA	NA	NA	NA	NA	3.96E-16
31		4-Chlorobiphenyl	4.06E-16	1.66E-17	2.11E-19	3.10E-20	8.10E-18	7.66E-22	2.76E-18	4.34E-16
32		4,4'-Chlorobiphenyl	2.04E-17	6.18E-19	2.60E-20	3.28E-21	4.08E-19	1.29E-23	1.39E-19	2.16E-17
33		Chloroethane	1.45E-14	5.66E-15	2.29E-19	3.87E-20	2.90E-16	4.32E-23	9.89E-17	2.06E-14
34		Chloroform	7.09E-14	NA	NA	NA	NA	NA	NA	7.09E-14
35		Dibenzofuran	1.28E-14	7.76E-16	2.76E-18	4.43E-19	2.55E-16	4.94E-20	8.70E-17	1.39E-14
36		Dichlorobenzenes (total)	1.65E-15	NA	NA	NA	NA	NA	NA	1.65E-15
37		1,4-Dichlorobenzene	1.04E-16	NA	NA	NA	NA	NA	NA	1.04E-16
38		1,1-Dichloroethane	4.71E-15	NA	NA	NA	NA	NA	NA	4.71E-15
39		1,2-Dichloroethane	1.47E-15	1.51E-15	2.29E-20	3.88E-21	2.94E-17	1.29E-22	1.00E-17	3.02E-15
40		1,1-Dichloroethene	2.52E-15	NA	NA	NA	NA	NA	NA	2.52E-15
41		1,2-Dichloroethene	2.18E-15	NA	NA	NA	NA	NA	NA	2.18E-15
42		1,2-Dichloropropane	9.34E-16	NA	NA	NA	NA	NA	NA	9.34E-16
43		Dieldrin	1.46E-17	1.22E-16	4.94E-20	5.02E-21	2.91E-19	2.44E-24	9.92E-20	1.37E-16
44		Dimethyldisulfide	4.01E-15	NA	NA	NA	NA	NA	NA	4.01E-15
45		Hexachlorobenzene	3.86E-14	3.09E-15	4.20E-17	5.47E-18	7.70E-16	9.71E-19	2.62E-16	4.27E-14
46		Hydrazine	4.98E-11	1.04E-08	9.42E-18	1.59E-18	9.95E-13	7.96E-20	3.39E-13	1.04E-08
47		Lindane	6.78E-18	8.04E-19	6.29E-22	1.05E-22	1.35E-19	1.07E-25	4.61E-20	7.77E-18
48		Malathion	2.00E-17	1.52E-18	1.24E-21	2.07E-22	4.00E-19	0.00E+00	1.36E-19	2.21E-17
49		Methyl chloride	1.96E-15	NA	NA	NA	NA	NA	NA	1.96E-15
50		Methylene chloride	1.18E-13	NA	NA	NA	NA	NA	NA	1.18E-13
51		Methyl ethyl ketone	2.47E-15	7.86E-15	1.18E-20	2.00E-21	4.94E-17	0.00E+00	1.68E-17	1.04E-14
52		4-Methylphenol	2.25E-15	1.03E-15	5.47E-20	9.23E-21	4.48E-17	6.13E-23	1.53E-17	3.34E-15
53		Monomethyl hydrazine	1.57E-11	2.45E-09	2.97E-18	5.03E-19	3.14E-13	2.52E-20	1.07E-13	2.47E-09
54		Naphthalene	2.65E-16	3.68E-17	2.58E-20	4.29E-21	5.29E-18	3.35E-19	1.80E-18	3.09E-16
55		Naphthalene carbonitrile	1.40E-12	1.94E-13	1.37E-16	2.27E-17	2.80E-14	7.72E-18	9.52E-15	1.63E-12
56		n-Nitrosodimethylamine	1.60E-14	1.14E-12	3.08E-20	5.21E-21	3.19E-16	0.00E+00	1.09E-16	1.16E-12
57		PAHs								
58		Acenaphthalene	6.38E-14	9.14E-15	1.30E-17	2.10E-18	1.27E-15	2.37E-20	4.33E-16	7.46E-14
59		Acenaphthene	6.38E-14	4.37E-15	1.11E-17	1.81E-18	1.27E-15	9.18E-20	4.33E-16	6.99E-14
60		Benzo(a)pyrene	1.28E-13	6.14E-16	6.38E-16	5.94E-17	2.53E-15	3.17E-19	8.70E-16	1.33E-13

A	B	C	TABLE 4	AN	AO	AP	AQ	AR	AS	AT	AU
61		Chrysene	1.28E-14	1.28E-14	4.59E-16	2.23E-17	2.63E-18	2.55E-16	8.01E-19	8.70E-17	1.36E-14
62		Dibenzo(a,h)anthracene	1.28E-13	1.28E-13	1.06E-15	7.38E-16	6.66E-17	2.55E-15	1.79E-16	8.70E-16	1.33E-13
63		Fluoranthene	1.28E-13	1.28E-13	8.78E-15	9.94E-17	1.38E-17	2.55E-15	NA	8.70E-16	1.40E-13
64		Fluorene	1.28E-14	1.28E-14	1.09E-15	3.65E-18	5.74E-19	2.55E-16	6.60E-20	8.70E-17	1.42E-14
65		Phenanthrene	4.98E-17	4.98E-17	3.12E-18	1.76E-20	2.71E-21	9.95E-19	2.27E-19	3.39E-19	5.45E-17
66		Pyrene	2.56E-13	2.56E-13	1.64E-14	1.89E-16	2.64E-17	5.11E-15	3.62E-18	1.74E-15	2.79E-13
67		Parathion	3.17E-17	3.17E-17	2.30E-18	4.93E-21	8.06E-22	6.33E-19	7.17E-25	2.15E-19	3.49E-17
68		Pentachlorobenzene	1.57E-14	1.57E-14	2.41E-15	1.02E-17	1.45E-18	3.14E-16	NA	1.07E-16	1.86E-14
69		Phenol	2.51E-16	2.51E-16	2.57E-16	3.84E-21	6.50E-22	5.02E-18	NA	1.71E-18	5.16E-16
70		Pyridine	1.40E-12	1.40E-12	NA	NA	NA	NA	NA	NA	1.40E-12
71		Quinoline	1.44E-14	1.44E-14	5.02E-15	3.83E-19	6.47E-20	2.88E-16	1.43E-20	9.80E-17	1.98E-14
72		Tetrachlorobenzene	7.72E-15	7.72E-15	2.76E-15	2.18E-18	3.43E-19	1.54E-16	NA	5.25E-17	1.07E-14
73		Tetrachloroethene	2.70E-16	2.70E-16	NA	NA	NA	NA	NA	NA	2.70E-16
74		Toluene	4.30E-15	4.30E-15	1.68E-16	7.27E-19	1.18E-19	7.81E-17	2.17E-20	2.66E-17	4.30E-15
75		Trichlorobenzene	3.91E-15	3.91E-15	NA	NA	NA	NA	NA	NA	4.18E-15
76		Trichloroethene	2.88E-15	2.88E-15	NA	NA	NA	NA	NA	NA	2.88E-15
77		Unsym. dimethyl hydrazine	6.20E-11	6.20E-11	5.68E-09	2.22E-17	3.75E-18	1.24E-12	9.92E-20	4.21E-13	5.74E-09
78		Vapona	1.25E-16	1.25E-16	5.37E-17	1.81E-21	3.05E-22	2.50E-18	4.78E-25	8.52E-19	1.82E-16
79		Vinyl acetate	1.78E-15	1.78E-15	NA	NA	NA	NA	NA	NA	1.78E-15
80		Vinyl chloride	1.65E-15	1.65E-15	NA	NA	NA	NA	NA	NA	1.65E-15
81		Xylenes (total)	3.07E-16	3.07E-16	NA	NA	NA	NA	NA	NA	3.07E-16
82											
83		INORGANICS									
84		Arsenic	1.69E-12	1.69E-12	1.77E-15	1.17E-14	6.61E-17	3.37E-14	9.84E-15	1.15E-15	1.75E-12
85		Cadmium	9.79E-15	9.79E-15	1.20E-16	2.41E-17	4.55E-19	1.95E-16	NA	6.65E-18	1.01E-14
86		Chromium (III)	4.34E-14	4.34E-14	NA	NA	NA	NA	NA	NA	4.34E-14
87		Chromium (VI)	1.53E-15	1.53E-15	NA	NA	NA	NA	NA	NA	1.53E-15
88		Copper	6.42E-14	6.42E-14	NA	NA	NA	NA	1.20E-15	NA	6.54E-14
89		Iron	1.56E-09	1.56E-09	NA	NA	NA	NA	NA	NA	1.56E-09
90		Lead	6.33E-14	6.33E-14	NA	NA	NA	NA	NA	NA	6.33E-14
91		Mercury	6.33E-14	6.33E-14	1.05E-15	6.15E-17	1.99E-15	1.26E-15	NA	4.30E-17	6.77E-14
92		Selenium	1.92E-13	1.92E-13	NA	NA	NA	NA	NA	NA	1.92E-13
93		Silver	8.76E-16	8.76E-16	NA	NA	NA	NA	NA	NA	8.76E-16
94		Zinc	5.03E-13	5.03E-13	NA	NA	NA	NA	4.58E-15	NA	5.07E-13
95											
96											
97											
98											
99											
100											
101											
102											
103											

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2	3	4	5	6	7	8	9	10	11	12
TABLE 5										
CHILD TOTAL EXPOSURE - MAXIMUM										
13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56
57	58	59	60							
BASE CASE										
18-Jun-91										
14:39:20										
RES-B										
ORGANICS										
13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56
57	58	59	60							
Acetone										
5.66E-15	5.12E-12	3.48E-11	NA	1.40E-17	NA	2.36E-18	1.04E-13	NA	NA	5.66E-15
Acetonitrile	5.12E-12	3.48E-11	NA	1.40E-17	NA	2.36E-18	1.04E-13	NA	NA	4.01E-11
Acrylonitrile	2.18E-12	NA	NA	NA	NA	NA	NA	NA	NA	2.18E-12
Aldrin	7.95E-18	1.02E-17	8.37E-18	8.37E-18	8.37E-18	4.10E-19	1.61E-19	6.34E-27	5.48E-20	2.71E-17
Aniline	2.88E-13	2.41E-13	2.69E-18	2.69E-18	2.69E-18	4.43E-19	5.83E-15	5.27E-19	1.98E-15	5.37E-13
Atrazine	1.78E-15	3.44E-16	1.25E-19	1.25E-19	1.25E-19	1.69E-20	3.60E-17	0.00E+00	1.23E-17	2.17E-15
Benzaldehyde	1.31E-13	5.42E-14	2.23E-18	2.23E-18	2.23E-18	3.58E-19	2.65E-15	5.67E-20	9.04E-16	1.89E-13
Benzene	1.65E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.65E-15
Benzofuran	6.38E-13	1.24E-13	4.42E-17	4.42E-17	4.42E-17	5.98E-18	1.29E-14	1.25E-18	4.40E-15	7.79E-13
Benzoic Acid	6.42E-14	1.72E-14	1.67E-18	1.67E-18	1.67E-18	2.60E-19	1.30E-15	4.96E-20	4.43E-16	8.32E-14
Benzonitrile	1.40E-12	5.28E-13	2.60E-17	2.60E-17	2.60E-17	4.15E-18	2.84E-14	6.74E-19	9.66E-15	1.97E-12
Benzothiazole	5.97E-16	1.39E-16	1.83E-20	1.83E-20	1.83E-20	2.79E-21	1.21E-17	5.67E-24	4.12E-18	7.52E-16
Biphenyl	6.42E-13	NA	NA	NA	NA	NA	NA	NA	NA	6.42E-13
Bis(2-ethylhexyl)phthalate	3.52E-16	3.44E-16	7.91E-15	7.91E-15	7.91E-15	3.83E-16	7.14E-18	7.34E-24	2.43E-18	9.00E-15
Carbazole	2.88E-15	3.55E-16	4.96E-19	4.96E-19	4.96E-19	5.56E-20	5.83E-17	7.46E-21	1.98E-17	3.31E-15
Carbon Tetrachloride	8.35E-15	NA	NA	NA	NA	NA	NA	NA	NA	8.35E-15
4-Chloroaniline	1.65E-16	4.31E-17	4.11E-21	4.11E-21	4.11E-21	6.40E-22	3.34E-18	2.13E-21	1.14E-18	2.12E-16
Chlorobenzene	3.96E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.96E-16
4-Chlorobiphenyl	4.06E-16	2.44E-17	1.52E-18	1.52E-18	1.52E-18	9.48E-20	8.22E-18	7.66E-22	2.80E-18	4.43E-16
4,4'-Chlorobiphenyl	2.04E-17	1.01E-18	3.41E-19	3.41E-19	3.41E-19	1.86E-20	4.14E-19	1.29E-23	1.41E-19	2.24E-17
Chloroethane	1.45E-14	6.01E-15	2.50E-19	2.50E-19	2.50E-19	4.01E-20	2.95E-16	4.32E-23	1.00E-16	2.10E-14
Chloroform	7.09E-14	NA	NA	NA	NA	NA	NA	NA	NA	7.09E-14
Dibenzofuran	1.28E-14	1.02E-15	9.63E-18	9.63E-18	9.63E-18	7.80E-19	2.59E-16	4.94E-20	8.82E-17	1.42E-14
Dichlorobenzenes (total)	1.65E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.65E-15
1,4-Dichlorobenzene	1.04E-16	NA	NA	NA	NA	NA	NA	NA	NA	1.04E-16
1,1-Dichloroethane	4.71E-15	NA	NA	NA	NA	NA	NA	NA	NA	4.71E-15
1,2-Dichloroethane	1.47E-15	1.56E-15	2.51E-20	2.51E-20	2.51E-20	4.02E-21	2.98E-17	1.29E-22	1.02E-17	3.07E-15
1,1-Dichloroethene	2.52E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.52E-15
1,2-Dichloroethene	2.18E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.18E-15
1,2-Dichloropropane	9.34E-16	NA	NA	NA	NA	NA	NA	NA	NA	9.34E-16
Dieldrin	1.46E-17	1.24E-16	9.88E-19	9.88E-19	9.88E-19	5.05E-20	2.95E-19	2.44E-24	1.01E-19	1.40E-16
Dimethyldisulfide	4.01E-15	NA	NA	NA	NA	NA	NA	NA	NA	4.01E-15
Hexachlorobenzene	3.86E-14	3.85E-15	5.04E-16	5.04E-16	5.04E-16	2.79E-17	7.81E-16	9.71E-19	2.66E-16	4.40E-14
Hydrazine	4.98E-11	1.05E-08	9.55E-18	9.55E-18	9.55E-18	1.62E-18	1.01E-12	7.96E-20	3.44E-13	1.06E-08
Lindane	6.78E-18	9.41E-19	1.19E-21	1.19E-21	1.19E-21	1.33E-22	1.37E-19	1.07E-25	4.68E-20	7.91E-18
Malathion	2.00E-17	1.91E-18	1.88E-21	1.88E-21	1.88E-21	2.41E-22	4.05E-19	0.00E+00	1.38E-19	2.25E-17
Methyl chloride	1.96E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.96E-15
Methylene chloride	1.18E-13	NA	NA	NA	NA	NA	NA	NA	NA	1.18E-13
Methyl ethyl ketone	2.47E-15	8.02E-15	1.22E-20	1.22E-20	1.22E-20	2.04E-21	5.01E-17	0.00E+00	1.71E-17	1.06E-14
4-Methylphenol	2.25E-15	1.09E-15	6.34E-20	6.34E-20	6.34E-20	9.75E-21	4.55E-17	6.13E-23	1.55E-17	3.40E-15
Monomethyl hydrazine	1.57E-11	2.49E-09	3.01E-18	3.01E-18	3.01E-18	5.10E-19	3.18E-13	2.52E-20	1.08E-13	2.50E-09
Naphthalene	2.65E-16	4.22E-17	5.02E-20	5.02E-20	5.02E-20	5.51E-21	5.36E-18	3.35E-19	1.83E-18	3.15E-16
Naphthalene carbonitrile	1.40E-12	2.23E-13	2.66E-16	2.66E-16	2.66E-16	2.92E-17	2.84E-14	7.72E-18	9.66E-15	1.66E-12
n-Nitrosodimethylamine	1.60E-14	1.16E-12	3.13E-20	3.13E-20	3.13E-20	5.29E-21	3.24E-16	0.00E+00	1.10E-16	1.17E-12
PAHs										
Acenaphthalene	6.38E-14	1.05E-14	4.36E-17	4.36E-17	4.36E-17	3.60E-18	1.29E-15	2.37E-19	4.40E-16	7.60E-14
Acenaphthene	6.38E-14	5.62E-15	3.28E-17	3.28E-17	3.28E-17	2.87E-18	1.29E-15	9.18E-20	4.40E-16	7.11E-14
Benzo(a)pyrene	1.28E-13	3.00E-15	1.43E-14	1.43E-14	1.43E-14	7.21E-16	2.59E-15	3.17E-19	8.82E-16	1.49E-13

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
61	Chrysene		1.28E-14	7.04E-16	3.42E-16	1.81E-17	2.59E-16	8.01E-19	8.82E-17	1.42E-14
62	Dibenzo(a,h)anthracene		1.28E-13	3.45E-15	1.72E-14	8.61E-16	2.59E-15	1.79E-16	8.82E-16	1.53E-13
63	Fluoranthene		1.28E-13	1.13E-14	9.62E-16	5.56E-17	2.59E-15	NA	8.82E-16	1.44E-13
64	Fluorene		1.28E-14	1.35E-15	1.61E-17	1.18E-18	2.59E-16	6.60E-20	8.82E-17	1.45E-14
65	Phenanthrene		4.98E-17	4.09E-18	9.29E-20	6.38E-21	1.01E-18	2.27E-19	3.44E-19	5.56E-17
66	Pyrene		2.56E-13	2.14E-14	1.76E-15	1.03E-16	5.18E-15	3.62E-18	1.76E-15	2.86E-13
67	Parathion		3.17E-17	2.93E-18	1.53E-20	1.22E-21	6.42E-19	7.17E-25	2.19E-19	3.55E-17
68	Pentachlorobenzene		1.57E-14	2.74E-15	8.69E-17	5.18E-18	3.18E-16	NA	1.08E-16	1.90E-14
69	Phenol		2.51E-16	2.66E-16	4.19E-21	6.73E-22	5.09E-18	NA	1.73E-18	5.24E-16
70	Pyridine		1.40E-12	NA	NA	NA	NA	NA	NA	1.40E-12
71	Quinoline		1.44E-14	5.37E-15	4.51E-19	6.86E-20	2.92E-16	1.43E-16	9.94E-17	2.02E-14
72	Tetrachlorobenzene		7.72E-15	2.94E-15	9.55E-18	7.03E-19	1.56E-16	NA	5.33E-17	1.09E-14
73	Tetrachloroethene		2.70E-16	NA	NA	NA	NA	NA	NA	2.70E-16
74	Toluene		4.30E-15	NA	NA	NA	NA	NA	NA	4.30E-15
75	Trichlorobenzene		3.91E-15	2.43E-16	2.25E-18	1.93E-19	7.92E-17	2.17E-20	2.70E-17	4.26E-15
76	Trichloroethene		2.88E-15	NA	NA	NA	NA	NA	NA	2.88E-15
77	Unsym. dimethyl hydrazine		6.20E-11	5.76E-09	2.25E-17	3.81E-18	1.25E-12	9.92E-20	4.27E-13	5.83E-09
78	Vapona		1.23E-16	5.68E-17	1.96E-21	3.16E-22	2.54E-18	4.78E-25	8.64E-19	1.86E-16
79	Vinyl acetate		1.78E-15	NA	NA	NA	NA	NA	NA	1.78E-15
80	Vinyl chloride		1.65E-15	NA	NA	NA	NA	NA	NA	1.65E-15
81	Xylenes (total)		3.07E-16	NA	NA	NA	NA	NA	NA	3.07E-16
82										
83	INORGANICS									
84	Arsenic		1.69E-12	3.31E-14	6.24E-14	3.31E-16	3.42E-14	9.84E-15	1.16E-15	1.83E-12
85	Cadmium		9.79E-15	3.04E-16	7.33E-17	8.82E-19	1.98E-16	NA	6.75E-18	1.04E-14
86	Chromium (III)		4.34E-14	NA	NA	NA	NA	NA	NA	4.34E-14
87	Chromium (VI)		1.53E-15	NA	NA	NA	NA	NA	NA	1.53E-15
88	Copper		6.42E-14	NA	NA	NA	NA	1.20E-15	NA	6.54E-14
89	Iron		1.56E-09	NA	NA	NA	NA	NA	NA	1.56E-09
90	Lead		6.33E-14	NA	NA	NA	NA	NA	NA	6.33E-14
91	Mercury		6.33E-14	2.24E-15	2.04E-16	3.26E-15	1.28E-15	NA	4.37E-17	7.03E-14
92	Selenium		1.92E-13	NA	NA	NA	NA	NA	NA	1.92E-13
93	Silver		8.76E-16	NA	NA	NA	NA	NA	NA	8.76E-16
94	Zinc		5.03E-13	NA	NA	NA	NA	4.58E-15	NA	5.07E-13
95										
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103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cai*br/bw/ugmg

A	B	C	BH	BI	BJ
			TABLE 6		
			INFANT TOTAL EXPOSURE		
2					
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18-Jun-91 14:59:20 RES-B	INHALATION (mg/kg/day)	BREAST MILK (mg/kg/day)	TOTAL (mg/kg/day)
ORGANICS			
Acetone	3.70E-15	6.43E-17	3.77E-15
Acetonitrile	3.35E-12	7.93E-11	8.27E-11
Acrylonitrile	1.43E-12	4.40E-15	1.43E-12
Aldrin	5.20E-18	4.34E-17	4.86E-17
Aniline	1.88E-13	9.05E-13	1.09E-12
Atrazine	1.16E-15	3.62E-15	4.79E-15
Benzaldehyde	8.58E-14	3.13E-13	3.98E-13
Benzene	1.08E-15	1.25E-18	1.08E-15
Benzofuran	4.17E-13	1.30E-12	1.72E-12
Benzoic Acid	4.20E-14	1.37E-13	1.79E-13
Benzonitrile	9.17E-13	3.25E-12	4.17E-12
Benzothiazole	3.91E-16	1.23E-15	1.62E-15
Biphenyl	4.20E-13	7.29E-15	4.28E-13
Bis(2-ethylhexyl)phthalate	2.31E-16	6.95E-15	7.18E-15
Carbazole	1.88E-15	5.45E-15	7.33E-15
Carbon Tetrachloride	5.47E-15	9.49E-17	5.56E-15
4-Chloroaniline	1.08E-16	3.47E-16	4.55E-16
Chlorobenzene	2.59E-16	4.50E-18	2.64E-16
4-Chlorobiphenyl	2.66E-16	7.14E-16	9.80E-16
4,4'-Chlorobiphenyl	1.34E-17	3.56E-17	4.90E-17
Chloroethane	9.52E-15	3.47E-14	4.43E-14
Chloroform	4.64E-14	8.06E-16	4.72E-14
Dibenzofuran	8.38E-15	2.31E-14	3.14E-14
Dichlorobenzenes (total)	1.08E-15	1.87E-17	1.10E-15
1,4-Dichlorobenzene	6.82E-17	1.18E-18	6.93E-17
1,1-Dichloroethane	3.09E-15	5.36E-17	3.14E-15
1,2-Dichloroethane	9.64E-16	5.81E-15	6.78E-15
1,1-Dichloroethene	1.65E-15	2.87E-17	1.68E-15
1,2-Dichloroethene	1.43E-15	2.48E-17	1.45E-15
1,2-Dichloropropane	6.11E-16	1.06E-17	6.22E-16
Dieldrin	9.55E-18	3.25E-16	3.35E-16
Dimethyldisulfide	2.62E-15	4.56E-17	2.67E-15
Hexachlorobenzene	2.52E-14	1.62E-14	4.15E-14
Hydrazine	3.26E-11	2.05E-08	2.05E-08
Lindane	4.44E-18	1.31E-17	1.75E-17
Malathion	1.31E-17	3.63E-17	4.94E-17
Methyl chloride	1.28E-15	2.22E-17	1.30E-15
Methylene chloride	7.73E-14	1.34E-15	7.86E-14
Methyl ethyl ketone	1.62E-15	2.05E-14	2.22E-14
4-Methylphenol	1.47E-15	5.99E-15	7.46E-15
Monomethyl hydrazine	1.03E-11	4.45E-09	4.46E-09
Naphthalene	1.73E-16	5.26E-16	6.99E-16
Naphthalene carbonitrile	9.17E-13	2.78E-12	3.69E-12
n-Nitrosodimethylamine	1.05E-14	2.77E-12	2.78E-12
PAHS			
Acenaphthalene	4.17E-14	1.28E-13	1.70E-13
Acenaphthene	4.17E-14	1.16E-13	1.58E-13
Benzo(a)pyrene	8.38E-14	2.24E-13	3.08E-13

A - B	C	BH	BI	BJ
2		TABLE 6		
61	Chrysene	8.38E-15	2.26E-14	3.10E-14
62	Dibenzo(a,h)anthracene	8.38E-14	2.27E-13	3.11E-13
63	Fluoranthene	8.38E-14	2.34E-13	3.18E-13
64	Fluorene	8.38E-15	2.39E-14	3.22E-14
65	Phenanthrene	3.26E-17	9.06E-17	1.23E-16
66	Pyrene	1.68E-13	4.66E-13	6.34E-13
67	Parathion	2.07E-17	5.80E-17	7.87E-17
68	Pentachlorobenzene	1.03E-14	7.23E-15	1.75E-14
69	Phenol	1.65E-16	9.91E-16	1.16E-15
70	Pyridine	9.17E-13	1.59E-14	9.33E-13
71	Quinoline	9.43E-15	3.47E-14	4.41E-14
72	Tetrachlorobenzene	5.05E-15	4.42E-15	9.47E-15
73	Tetrachloroethene	1.77E-16	3.07E-18	1.80E-16
74	Toluene	2.82E-15	8.15E-18	2.82E-15
75	Trichlorobenzene	2.56E-15	1.55E-15	4.11E-15
76	Trichloroethene	1.88E-15	3.27E-17	1.92E-15
77	Unsym. dimethyl hydrazine	4.06E-11	1.15E-08	1.15E-08
78	Vapona	8.20E-17	3.08E-16	3.90E-16
79	Vinyl acetate	1.16E-15	2.02E-17	1.18E-15
80	Vinyl chloride	1.08E-15	1.87E-17	1.10E-15
81	Xylenes (total)	2.01E-16	1.16E-19	2.01E-16
82				

83	INORGANICS			
84	Arsenic	1.10E-12	NE	1.10E-12
85	Cadmium	6.41E-15	NE	6.41E-15
86	Chromium (III)	2.84E-14	NE	2.84E-14
87	Chromium (VI)	9.99E-16	NE	9.99E-16
88	Copper	4.20E-14	NE	4.20E-14
89	Iron	1.02E-09	NE	1.02E-09
90	Lead	4.14E-14	NE	4.14E-14
91	Mercury	4.14E-14	NE	4.14E-14
92	Selenium	1.25E-13	NE	1.25E-13
93	Silver	5.73E-16	NE	5.73E-16
94	Zinc	3.29E-13	NE	3.29E-13
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br 3.80E+00 M3/day
 bw 9.00E+00 Kg
 um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	BL	BM	BN	BO	BP	BQ	BR
2			TABLE 7						
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MOTHER'S MILK PATHWAY

18-Jun-91
14:39:20
RES-B

DI	DI	DI	DI	DI	DI	DI	DI	DI	DI
Average	Maximum	TF	Average	Maximum	TF	Average	Maximum	Average	Maximum
Daily Intake	Total	Breast milk	Daily Intake	Total	Breast milk	Daily Intake	Total	Daily Intake	Total
(mg/kg/day)	(mg/kg/day)	Transfer	(mg/kg/day)	(mg/kg/day)	Factor	(mg/kg/day)	(mg/kg/day)	(mg/kg/day)	(mg/kg/day)
		(day)							
2.51E-15	2.51E-15	2.89E-01	7.23E-16	7.23E-16	2.89E-01	7.23E-16	7.23E-16	6.43E-17	6.43E-17
2.15E-11	2.15E-11	4.09E+01	8.79E-10	8.79E-10	4.09E+01	8.79E-10	8.79E-10	7.81E-11	7.81E-11
9.64E-13	9.64E-13	5.13E-02	4.95E-14	4.95E-14	5.13E-02	4.95E-14	4.95E-14	4.40E-15	4.40E-15
1.02E-17	1.02E-17	4.09E+01	4.17E-16	4.17E-16	4.09E+01	4.17E-16	4.17E-16	3.71E-17	3.71E-17
2.44E-13	2.44E-13	4.09E+01	9.99E-12	9.99E-12	4.09E+01	9.99E-12	9.99E-12	8.88E-13	8.88E-13
9.75E-16	9.75E-16	4.09E+01	3.99E-14	3.99E-14	4.09E+01	3.99E-14	3.99E-14	3.55E-15	3.55E-15
8.42E-14	8.42E-14	4.09E+01	3.45E-12	3.45E-12	4.09E+01	3.45E-12	3.45E-12	3.06E-13	3.06E-13
7.30E-16	7.30E-16	1.92E-02	1.40E-17	1.40E-17	1.92E-02	1.40E-17	1.40E-17	1.25E-18	1.25E-18
3.50E-13	3.50E-13	4.09E+01	1.43E-11	1.43E-11	4.09E+01	1.43E-11	1.43E-11	1.27E-12	1.27E-12
3.67E-14	3.67E-14	4.09E+01	1.50E-12	1.50E-12	4.09E+01	1.50E-12	1.50E-12	1.34E-13	1.34E-13
8.75E-13	8.75E-13	4.09E+01	3.58E-11	3.58E-11	4.09E+01	3.58E-11	3.58E-11	3.18E-12	3.18E-12
3.32E-16	3.32E-16	4.09E+01	1.36E-14	1.36E-14	4.09E+01	1.36E-14	1.36E-14	1.21E-15	1.21E-15
2.84E-13	2.84E-13	2.89E-01	8.21E-14	8.21E-14	2.89E-01	8.21E-14	8.21E-14	7.29E-15	7.29E-15
4.24E-16	4.24E-16	4.09E+01	1.74E-14	1.74E-14	4.09E+01	1.74E-14	1.74E-14	1.54E-15	1.54E-15
1.47E-15	1.47E-15	4.09E+01	6.00E-14	6.00E-14	4.09E+01	6.00E-14	6.00E-14	5.33E-15	5.33E-15
3.70E-15	3.70E-15	2.89E-01	1.07E-15	1.07E-15	2.89E-01	1.07E-15	1.07E-15	9.49E-17	9.49E-17
9.33E-17	9.33E-17	4.09E+01	3.82E-15	3.82E-15	4.09E+01	3.82E-15	3.82E-15	3.40E-16	3.40E-16
1.75E-16	1.75E-16	2.89E-01	5.06E-17	5.06E-17	2.89E-01	5.06E-17	5.06E-17	4.50E-18	4.50E-18
1.92E-16	1.92E-16	4.09E+01	7.85E-15	7.85E-15	4.09E+01	7.85E-15	7.85E-15	6.98E-16	6.98E-16
9.52E-18	9.52E-18	4.09E+01	3.90E-16	3.90E-16	4.09E+01	3.90E-16	3.90E-16	3.47E-17	3.47E-17
9.36E-15	9.36E-15	4.09E+01	3.83E-13	3.83E-13	4.09E+01	3.83E-13	3.83E-13	3.41E-14	3.41E-14
3.14E-14	3.14E-14	2.89E-01	9.07E-15	9.07E-15	2.89E-01	9.07E-15	9.07E-15	8.06E-16	8.06E-16
6.20E-15	6.20E-15	4.09E+01	2.54E-13	2.54E-13	4.09E+01	2.54E-13	2.54E-13	2.26E-14	2.26E-14
7.30E-16	7.30E-16	2.89E-01	2.11E-16	2.11E-16	2.89E-01	2.11E-16	2.11E-16	1.87E-17	1.87E-17
4.61E-17	4.61E-17	2.89E-01	1.33E-17	1.33E-17	2.89E-01	1.33E-17	1.33E-17	1.18E-18	1.18E-18
2.09E-15	2.09E-15	2.89E-01	6.03E-16	6.03E-16	2.89E-01	6.03E-16	6.03E-16	5.36E-17	5.36E-17
1.57E-15	1.57E-15	4.09E+01	6.43E-14	6.43E-14	4.09E+01	6.43E-14	6.43E-14	5.71E-15	5.71E-15
1.12E-15	1.12E-15	2.89E-01	3.23E-16	3.23E-16	2.89E-01	3.23E-16	3.23E-16	2.87E-17	2.87E-17
9.66E-16	9.66E-16	2.89E-01	2.79E-16	2.79E-16	2.89E-01	2.79E-16	2.79E-16	2.48E-17	2.48E-17
4.14E-16	4.14E-16	2.89E-01	1.19E-16	1.19E-16	2.89E-01	1.19E-16	1.19E-16	1.06E-17	1.06E-17
8.79E-17	8.79E-17	4.09E+01	3.60E-15	3.60E-15	4.09E+01	3.60E-15	3.60E-15	3.20E-16	3.20E-16
1.78E-15	1.78E-15	2.89E-01	5.12E-16	5.12E-16	2.89E-01	5.12E-16	5.12E-16	4.56E-17	4.56E-17
1.93E-14	1.93E-14	9.24E+00	1.78E-13	1.78E-13	9.24E+00	1.78E-13	1.78E-13	1.58E-14	1.58E-14
5.55E-09	5.55E-09	4.09E+01	2.27E-07	2.27E-07	4.09E+01	2.27E-07	2.27E-07	2.02E-08	2.02E-08
3.52E-18	3.52E-18	4.09E+01	1.44E-16	1.44E-16	4.09E+01	1.44E-16	1.44E-16	1.28E-17	1.28E-17
9.75E-18	9.75E-18	4.09E+01	3.99E-16	3.99E-16	4.09E+01	3.99E-16	3.99E-16	3.55E-17	3.55E-17
8.67E-16	8.67E-16	2.89E-01	2.50E-16	2.50E-16	2.89E-01	2.50E-16	2.50E-16	2.22E-17	2.22E-17
5.23E-14	5.23E-14	2.89E-01	1.51E-14	1.51E-14	2.89E-01	1.51E-14	1.51E-14	1.34E-15	1.34E-15
5.56E-15	5.56E-15	4.09E+01	2.27E-13	2.27E-13	4.09E+01	2.27E-13	2.27E-13	2.02E-14	2.02E-14
1.61E-15	1.61E-15	4.09E+01	6.61E-14	6.61E-14	4.09E+01	6.61E-14	6.61E-14	5.87E-15	5.87E-15
1.20E-09	1.20E-09	4.09E+01	4.93E-08	4.93E-08	4.09E+01	4.93E-08	4.93E-08	4.38E-09	4.38E-09
1.41E-16	1.41E-16	4.09E+01	5.79E-15	5.79E-15	4.09E+01	5.79E-15	5.79E-15	5.15E-16	5.15E-16
7.47E-13	7.47E-13	4.09E+01	3.06E-11	3.06E-11	4.09E+01	3.06E-11	3.06E-11	2.72E-12	2.72E-12
7.51E-13	7.51E-13	4.09E+01	3.07E-11	3.07E-11	4.09E+01	3.07E-11	3.07E-11	2.73E-12	2.73E-12
3.44E-14	3.44E-14	4.09E+01	1.41E-12	1.41E-12	4.09E+01	1.41E-12	1.41E-12	1.25E-13	1.25E-13
3.12E-14	3.12E-14	4.09E+01	1.28E-12	1.28E-12	4.09E+01	1.28E-12	1.28E-12	1.14E-13	1.14E-13
5.76E-14	5.76E-14	4.09E+01	2.36E-12	2.36E-12	4.09E+01	2.36E-12	2.36E-12	2.10E-13	2.10E-13

A	B	C	BL	BM	BN	BO	BP	BQ	BR
61	Chrysene	6.01E-15	6.21E-15	4.09E+01	2.46E-13	2.54E-13	2.19E-14	2.26E-14	
62	Dibenzo(a,h)anthracene	5.80E-14	6.24E-14	4.09E+01	2.37E-12	2.56E-12	2.11E-13	2.27E-13	
63	Fluoranthene	6.29E-14	6.44E-14	4.09E+01	2.57E-12	2.64E-12	2.29E-13	2.34E-13	
64	Fluorene	6.42E-15	6.56E-15	4.09E+01	2.63E-13	2.69E-13	2.34E-14	2.39E-14	
65	Phenanthrene	2.44E-17	2.49E-17	4.09E+01	9.97E-16	1.02E-15	8.86E-17	9.06E-17	
66	Pyrene	1.25E-13	1.28E-13	4.09E+01	5.12E-12	5.24E-12	4.55E-13	4.66E-13	
67	Parathion	1.56E-17	1.59E-17	4.09E+01	6.38E-16	6.52E-16	5.67E-17	5.80E-17	
68	Pentachlorobenzene	8.61E-15	8.81E-15	9.24E+00	7.95E-14	8.13E-14	7.07E-15	7.23E-15	
69	Phenol	2.68E-16	2.72E-16	4.09E+01	1.10E-14	1.12E-14	9.74E-16	9.91E-16	
70	Pyridine	6.20E-13	6.20E-13	2.89E-01	1.79E-13	1.79E-13	1.59E-14	1.59E-14	
71	Quinoline	9.34E-15	9.53E-15	4.09E+01	3.83E-13	3.90E-13	3.40E-14	3.47E-14	
72	Tetrachlorobenzene	5.28E-15	5.38E-15	9.24E+00	4.87E-14	4.97E-14	4.33E-15	4.42E-15	
73	Tetrachloroethene	1.20E-16	1.20E-16	2.89E-01	3.45E-17	3.45E-17	3.07E-18	3.07E-18	
74	Toluene	1.91E-15	1.91E-15	4.81E-02	9.16E-17	9.16E-17	8.15E-18	8.15E-18	
75	Trichlorobenzene	1.89E-15	1.89E-15	9.24E+00	1.71E-14	1.74E-14	1.52E-15	1.52E-15	
76	Trichloroethene	1.27E-15	1.27E-15	2.89E-01	3.68E-16	3.68E-16	3.27E-17	3.27E-17	
77	Unsym. dimethyl hydrazine	3.10E-09	3.15E-09	4.09E+01	1.27E-07	1.29E-07	1.13E-08	1.13E-08	
78	Vapona	8.29E-17	8.46E-17	4.09E+01	3.39E-15	3.46E-15	3.02E-16	3.08E-16	
79	Vinyl acetate	7.87E-16	7.87E-16	2.89E-01	2.27E-16	2.27E-16	2.02E-17	2.02E-17	
80	Vinyl chloride	7.30E-16	7.30E-16	2.89E-01	2.11E-16	2.11E-16	1.87E-17	1.87E-17	
81	Xylenes (total)	1.36E-16	1.36E-16	9.62E-03	1.31E-18	1.31E-18	1.16E-19	1.16E-19	

83 INORGANICS

84	Arsenic	7.59E-13	7.85E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
85	Cadmium	4.43E-15	4.54E-15	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
86	Chromium (III)	1.92E-14	1.92E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
87	Chromium (VI)	6.76E-16	6.76E-16	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
88	Copper	2.90E-14	2.90E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
89	Iron	6.90E-10	6.90E-10	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
90	Lead	2.80E-14	2.80E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
91	Mercury	2.97E-14	3.08E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
92	Selenium	8.49E-14	8.49E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
93	Silver	3.88E-16	3.88E-16	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
94	Zinc	2.25E-13	2.25E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

$$TF = 0.8 * 0.04 / 0.3 / k$$

$$\text{Breast Milk} = DI * TF(\text{day})$$

$$EDI = BMC * IR / BW(\text{infant})$$

8.00E-01 Ingestion Rate (kg/day)
9.00E+00 Body Weight (kg) - infant

HALF LIVES	k	
0.33	2.08E+00	Acrylonitrile
0.125	5.54E+00	Benzene
240	2.89E-03	DDE
120	5.77E-03	DDT
1.875	3.70E-01	1,1-DCE & Phenol
266	2.61E-03	Dieldrin
2120	3.27E-04	Dioxin
60	1.15E-02	Hexachlorobenzene
0.3125	2.22E+00	Toluene
0.0625	1.11E+01	Xylene

D
TABLE 8
TOMATO CONSUMPTION - AVERAGE

TABLE 8 TOMATO CONSUMPTION - AVERAGE									
B	C	D	E	F	G	H	I	J	K
BASE CASE									

117	B	C	D	E	F	G	H	I	J	K
118	BASE CASE		TABLE 8							
177										
178	INORGANICS									
179	Arsenic		9.59E-12	1.31E-09	3.60E-04	4.70E-13	6.83E-13	1.15E-12	6.11E-16	1.45E-15
180	Cadmium		5.56E-14	7.57E-12	9.00E-03	6.81E-14	3.96E-15	7.21E-14	3.82E-17	9.06E-17
181	Mercury		3.60E-13	4.90E-11	1.20E-02	5.88E-13	2.56E-14	6.13E-13	3.25E-16	7.71E-16
182										
183										
184										
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										

$$VSDF = r * (1 - e^{-Y * K})$$

$$Cs = VSDF * Deposition * mgg / secyr$$

$$Cu = PUF * Csoil$$

$$EDI = (Ct) * ADITOM * HG / ADWT$$

ADULT
 6.40E-02
 7.00E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 3.15E+07
 1.00E+03

CHILD
 3.36E-02
 1.55E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 3.15E+07
 1.00E+03

TOMATO INGESTION RATE, Kg/day
 1.55E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 3.15E+07
 1.00E+03

BODY WEIGHT, KG
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 3.15E+07
 1.00E+03

ADITOM
 r
 k
 t
 Y
 HG
 secyr
 mgg

117	B	
118	BASE CASE	C

121
122
123

117	B	C	M	N	O	P	Q	R	S	T
118	BASE CASE									
177	TABLE 9									
178	INORGANICS									
179	Arsenic	9.59E-12	1.32E-09	3.60E-04	4.77E-13	2.39E-11	2.44E-11	1.29E-14	3.06E-14	
180	Cadmium	5.56E-14	7.68E-12	9.00E-03	6.91E-14	1.39E-13	2.08E-13	1.10E-16	2.61E-16	
181	Mercury	3.60E-13	4.97E-11	1.20E-02	5.96E-13	8.96E-13	1.49E-12	7.91E-16	1.88E-15	
182										
183										
184										
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										

$$VSDf = r * (1 - e^{-Y * K})$$

CS = VSDf * Deposition * mgg / secyr

Cu = PUF * Csoil

EDI = (Ct) * ADITOM * HG / ADWT

ADITOM
ADWT
r
k
t
Y
VSDf
HG
secyr
mgg

TOMATO INGESTION RATE , Kg/day
BODY WEIGHT, KG
r tomato
k tomato, 1/s
t tomato, s
Y tomato, Kg/M2
VSDf tomato, M2s/Kg
FRACT. CONSUMED FROM RURAL SOURCE.

CHILD
3.36E-02
1.55E+01
6.80E-02
5.78E-07
3.89E+06
1.34E+00
7.85E+04
5.80E-01
3.15E+07
1.00E+03

ADULT
6.40E-02
7.00E+01
6.80E-02
5.78E-07
3.89E+06
1.34E+00
7.85E+04
5.80E-01
3.15E+07
1.00E+03

117-B	C	V	W	X	Y	Z	AA	AB	AC
118	BASE CASE	TABLE 10							
119		LETUCE CONSUMPTION - AVERAGE							
120									
121									
122									
123	18-Jun-91	D	C soil	PUF	Cu	Cs	Ct	EDI	EDI
124	14:39:23	DRY	AVERAGE	PLANT UPTAKE	AVERAGE	AVERAGE	AVERAGE	ADULT	CHILD
125		RATE	CONC IN	FACTOR	CONC DUE	CONC ON	CONC ON	ESTIMATED	AVERAGE
126		g/M2/yr	SOIL		TO UPTAKE	PLANT	PLANT	DAILY	ESTIMATED
127			.2M		mg/Kg	SURFACE	mg/Kg	INTAKE	DAILY
128			mg/Kg			mg/Kg		INTAKE	INTAKE
129								mg/Kg/day	mg/Kg/day
130	ORGANICS								
131	Acetonitrile	2.91E-11	3.96E-09	3.06E+00	1.21E-08	4.16E-12	1.21E-08	1.20E-12	5.63E-13
132	Aldrin	4.51E-17	6.15E-15	9.93E-05	6.10E-19	6.46E-18	7.07E-18	6.97E-22	3.28E-22
133	Aniline	1.63E-12	2.23E-10	5.85E-01	1.30E-10	2.34E-13	1.30E-10	1.29E-14	6.05E-15
134	Atrazine	1.01E-14	1.38E-12	5.43E-02	7.46E-14	1.45E-15	7.61E-14	7.50E-18	3.53E-18
135	Benzaldehyde	7.45E-13	1.01E-10	2.69E-01	2.73E-11	1.07E-13	2.74E-11	2.70E-15	1.27E-15
136	Benzo(a)pyrene	3.62E-12	4.93E-10	5.50E-02	2.71E-11	5.19E-13	2.76E-11	2.72E-15	1.28E-15
137	Benzoic Acid	3.65E-13	4.97E-11	1.60E-01	7.95E-12	5.22E-14	8.00E-12	7.89E-16	3.71E-16
138	Benzonitrile	7.96E-12	1.08E-09	2.42E-01	2.62E-10	1.14E-12	2.64E-10	2.60E-14	1.22E-14
139	Benzo(b)fluoranthene	3.39E-15	4.62E-13	1.33E-01	6.13E-14	4.86E-16	6.18E-14	6.09E-18	2.87E-18
140	Bis(2-ethylhexyl)phthalate	2.00E-15	2.73E-13	1.68E-05	4.58E-18	2.87E-16	2.91E-16	2.87E-20	1.35E-20
141	Carbazole	1.63E-14	2.23E-12	2.40E-02	5.35E-14	2.34E-15	5.58E-14	5.50E-18	2.59E-18
142	4-Chloroaniline	9.36E-16	1.27E-13	1.69E-01	2.15E-14	1.34E-16	2.17E-14	2.14E-18	1.00E-18
143	4-Chlorobiphenyl	2.31E-15	3.14E-13	2.80E-03	8.78E-16	3.30E-16	1.21E-15	1.19E-19	5.61E-20
144	4,4'-Dichlorobiphenyl	1.16E-16	1.58E-14	1.13E-03	1.78E-17	1.66E-17	3.44E-17	3.40E-21	1.60E-21
145	Chloroethane	8.26E-14	1.13E-11	2.66E-01	1.79E-12	1.18E-14	3.00E-12	2.96E-16	1.39E-16
146	Dibenzofuran	7.27E-14	9.90E-12	7.93E-03	7.85E-14	1.04E-14	8.89E-14	8.77E-18	4.12E-18
147	1,2-Dichloroethane	8.36E-15	1.14E-12	2.69E-01	3.07E-13	1.20E-15	3.08E-13	3.04E-17	1.43E-17
148	Dieldrin	8.29E-17	1.13E-14	4.93E-04	5.56E-18	1.19E-17	1.74E-17	1.72E-21	8.09E-22
149	Hexachlorobenzene	2.19E-13	2.98E-11	1.31E-03	3.90E-14	3.14E-14	7.04E-14	6.94E-18	3.26E-18
150	Hydrazine	2.83E-10	3.85E-08	1.19E+02	4.58E-06	4.05E-11	4.58E-06	4.52E-10	2.13E-10
151	Lindane	3.85E-17	5.24E-15	2.37E-02	1.24E-16	5.51E-18	1.30E-16	1.28E-20	6.02E-21
152	Malathion	1.14E-16	1.55E-14	4.10E-02	6.35E-16	1.63E-17	6.51E-16	6.42E-20	3.02E-20
153	Methyl ethyl ketone	1.41E-14	1.91E-12	1.37E+00	2.63E-12	2.01E-15	2.63E-12	2.59E-16	1.22E-16
154	4-Methylphenol	1.28E-14	1.74E-12	1.46E-01	2.53E-13	1.83E-15	2.55E-13	2.51E-17	1.18E-17
155	Monomethyl hydrazine	8.93E-11	1.22E-08	1.19E+02	1.45E-06	1.28E-11	1.45E-06	1.43E-10	6.71E-11
156	Naphthalene	1.50E-15	2.05E-13	2.22E-02	4.54E-15	2.15E-16	4.76E-15	4.69E-19	2.21E-19
157	Naphthalene carbonitrile	7.96E-12	1.08E-09	2.22E-02	2.40E-11	1.14E-12	2.52E-11	2.48E-15	1.17E-15
158	n-Nitrosodimethylamine	9.08E-14	1.24E-11	4.82E+00	5.96E-11	1.30E-14	5.96E-11	5.88E-15	2.77E-15
159	PAHs								
160	Acenaphthalene	3.62E-13	4.93E-11	8.48E-03	4.18E-13	5.19E-14	4.70E-13	4.63E-17	2.18E-17
161	Acenaphthene	3.62E-13	4.93E-11	1.04E-02	5.11E-13	5.19E-14	5.63E-13	5.55E-17	2.61E-17
162	Benzo(a)pyrene	7.27E-13	9.90E-11	3.68E-04	3.64E-14	1.04E-13	1.40E-13	1.38E-17	6.52E-18
163	Chrysene	7.27E-14	9.90E-12	8.53E-04	8.44E-15	1.04E-14	1.88E-14	1.86E-18	8.74E-19
164	Dibenzo(a,h)anthracene	7.27E-13	9.90E-11	3.30E-04	3.27E-14	1.04E-13	1.37E-13	1.35E-17	6.35E-18
165	Fluoranthene	7.27E-13	9.90E-11	1.83E-03	1.81E-13	1.04E-13	2.85E-13	2.81E-17	1.32E-17
166	Fluorene	7.27E-14	9.90E-12	5.60E-03	5.55E-14	1.04E-14	6.59E-14	6.49E-18	3.04E-18
167	phenanthrene	2.83E-16	3.85E-14	4.35E-03	1.68E-16	4.05E-17	2.08E-16	2.05E-20	9.66E-21
168	Pyrene	1.45E-12	1.98E-10	1.93E-03	3.81E-13	2.08E-13	5.89E-13	5.81E-17	2.73E-17
169	Parathion	1.80E-16	2.45E-14	1.20E-02	2.94E-16	2.58E-17	3.20E-16	3.15E-20	1.48E-20
170	Pentachlorobenzene	8.92E-14	1.22E-11	2.20E-03	2.67E-14	1.28E-14	3.95E-14	3.90E-18	1.83E-18
171	Phenol	1.43E-15	1.94E-13	2.77E-01	5.38E-14	2.04E-16	5.40E-14	5.33E-18	2.51E-18
172	Quinoline	8.19E-14	1.11E-11	1.29E-01	1.44E-12	1.17E-14	1.45E-12	1.43E-16	6.74E-17
173	Tetrachlorobenzene	4.39E-14	5.97E-12	5.68E-03	3.39E-14	6.28E-15	4.02E-14	3.96E-18	1.87E-18
174	Trichlorobenzene	2.22E-14	3.02E-12	9.56E-03	2.89E-14	3.18E-15	3.21E-14	3.16E-18	1.49E-18
175	Unsym. dimethyl hydrazine	3.52E-10	4.79E-08	4.93E+01	2.36E-06	5.04E-11	2.36E-06	2.33E-10	1.10E-10
176	Vapona	7.11E-16	9.69E-14	3.00E-01	2.91E-14	1.02E-16	2.92E-14	2.87E-18	1.35E-18

117	B	C	V	W	-X	Y	Z	AA	AB	AC
118	BASE CASE									
177			TABLE 10							
178	INORGANICS									
179	Arsenic		9.59E-12	1.31E-09	2.00E-03	2.61E-12	1.37E-12	3.98E-12	3.93E-16	1.85E-16
180	Cadmium		5.56E-14	7.57E-12	2.75E-02	2.08E-13	7.96E-15	2.16E-13	2.13E-17	1.00E-17
181	Mercury		3.60E-13	4.90E-11	4.50E-02	2.20E-12	5.15E-14	2.25E-12	2.22E-16	1.05E-16
182										
183										
184										
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196										
197										
198										
199										

$$VSDF = r * (1 - e^{-Y * K})$$

Cs = VSDF*Deposition*mgg/secyr

Cu = PUF*Csoil

EDI = (Cs+Cu)*ADILET*HG/ADWT

ADULT
1.19E-02
7.00E+01
1.50E-01
5.78E-07
5.62E+06
1.58E+00
1.58E+05
5.80E-01
3.15E+07
1.00E+03

CHILD
1.24E-03
1.55E+01
1.50E-01
5.78E-07
5.62E+06
1.58E+00
1.58E+05
5.80E-01
3.15E+07
1.00E+03

LETUCE INGESTION RATE , Kg/day
BODY WEIGHT, KG
r lettuce
k lettuce, 1/s
t lettuce, s
Y lettuce, Kg/M2
VSDF lettuce, M2s/Kg
FRACT. CONSUMED FROM RURAL SOURCE.
sec/yr
mg/g
-kt

ADILET
ADWT
r
k
t
Y
VSDF
HG
secyr
mgg

117	B	C	AE	AF	AG	AH	AI	AJ	AK	AL
118	BASE CASE	TABLE 11	D	C soil	PUF	Cu	Cs	Ct	EDI	EDI
119		LETUCE CONSUMPTION - MAXIMUM	DRY	MAXIMUM	PLANT UPTAKE	MAXIMUM	MAXIMUM	MAXIMUM	ADULT	CHILD
120			RATE	CONC IN	FACTOR	CONC.DUE	CONC. ON	CONC ON	ESTIMATED	ESTIMATED
121			9/M2/YR	SOIL		TO UPTAKE	PLANT	PLANT	DAILY	DAILY
122				-2M		mg/Kg	SURFACE	mg/Kg	INTAKE	INTAKE
123	18-Jun-91			mg/Kg					mg/Kg/day	mg/Kg/day
124	14:39:23									
125										
126										
127										
128										
129										
130	ORGANICS									
131	Acetonitrile	2.91E-11	4.02E-09	3.06E+00	1.23E-08	1.46E-10	1.46E-10	1.24E-08	1.23E-12	5.77E-13
132	Aldrin	4.51E-17	6.24E-15	9.93E-05	6.19E-19	2.26E-16	2.26E-16	2.27E-16	2.24E-20	1.05E-20
133	Aniline	1.63E-12	2.26E-10	5.83E-01	1.32E-10	8.19E-12	8.19E-12	1.40E-10	1.38E-14	6.51E-15
134	Atrazine	1.01E-14	1.40E-12	5.43E-02	7.57E-14	5.06E-14	5.06E-14	1.26E-13	1.25E-17	5.86E-18
135	Benzaldehyde	7.45E-13	1.03E-10	2.69E-01	2.77E-11	3.73E-12	3.73E-12	3.15E-11	3.10E-15	1.46E-15
136	Benzofuran	3.62E-12	5.00E-10	5.50E-02	2.75E-11	1.81E-11	1.81E-11	4.57E-11	4.50E-15	2.12E-15
137	Benzoic Acid	3.65E-13	5.04E-11	1.60E-01	8.06E-12	1.83E-12	1.83E-12	9.89E-12	9.75E-16	4.59E-16
138	Benzonitrile	7.96E-12	1.10E-09	2.42E-01	2.66E-10	3.99E-11	3.99E-11	3.06E-10	3.02E-14	1.42E-14
139	Benzothiazole	3.39E-15	4.69E-13	1.33E-01	6.22E-14	1.70E-14	1.70E-14	7.92E-14	7.81E-18	3.68E-18
140	Bis(2-ethylhexyl)phthalate	1.63E-14	2.77E-13	1.68E-05	4.65E-18	1.00E-14	1.00E-14	1.00E-14	9.90E-19	4.66E-19
141	Carbazole	1.63E-14	2.26E-12	2.40E-02	5.43E-14	8.19E-14	8.19E-14	1.36E-13	1.34E-17	6.32E-18
142	4-Chloroaniline	9.36E-16	1.29E-13	1.69E-01	2.18E-14	4.69E-15	4.69E-15	2.65E-14	2.62E-18	1.23E-18
143	4-Chlorobiphenyl	2.31E-15	3.18E-13	2.80E-03	8.91E-16	1.16E-14	1.16E-14	1.24E-14	1.23E-18	5.77E-19
144	4,4'-Chlorobiphenyl	1.16E-16	1.60E-14	1.13E-03	1.81E-17	5.81E-16	5.81E-16	6.00E-16	5.91E-20	2.78E-20
145	Chloroethane	8.26E-14	1.14E-11	2.66E-01	3.03E-12	4.14E-13	4.14E-13	3.45E-12	3.40E-16	1.60E-16
146	Dibenzofuran	7.27E-14	1.00E-11	7.93E-03	7.96E-14	3.64E-13	3.64E-13	4.44E-13	4.38E-17	2.06E-17
147	1,2-Dichloroethane	8.36E-15	1.16E-12	2.69E-01	3.11E-13	4.19E-14	4.19E-14	3.53E-13	3.48E-17	1.64E-17
148	Dieldrin	2.19E-17	1.14E-14	4.93E-04	5.65E-18	4.15E-16	4.15E-16	4.21E-16	4.15E-20	1.95E-20
149	Hexachlorobenzene	2.97E-13	3.03E-11	1.31E-03	3.96E-14	1.10E-12	1.10E-12	1.14E-12	1.12E-16	5.28E-17
150	Hydrazine	2.83E-10	3.91E-08	1.19E+02	4.65E-06	1.42E-09	1.42E-09	4.65E-06	4.59E-10	2.16E-10
151	Lindane	3.85E-17	5.32E-15	2.37E-02	1.26E-16	1.93E-16	1.93E-16	3.19E-16	3.15E-20	1.48E-20
152	Malathion	1.14E-16	1.57E-14	4.10E-02	6.44E-16	5.70E-16	5.70E-16	1.21E-15	1.20E-19	5.63E-20
153	Methyl ethyl ketone	1.41E-14	1.94E-12	1.37E+00	2.67E-12	7.04E-14	7.04E-14	2.74E-12	2.70E-16	1.27E-16
154	4-Methylphenol	1.28E-14	1.76E-12	1.46E-01	2.57E-13	6.39E-14	6.39E-14	3.21E-13	3.16E-17	1.49E-17
155	Monomethyl hydrazine	8.93E-11	1.23E-08	1.19E+02	1.47E-06	4.47E-10	4.47E-10	1.47E-06	1.45E-10	6.81E-11
156	Naphthalene	1.50E-15	2.08E-13	2.22E-02	4.61E-15	7.54E-15	7.54E-15	1.21E-14	1.20E-18	5.64E-19
157	Naphthalene carbonitrile	7.96E-12	1.10E-09	2.22E-02	2.44E-11	3.99E-11	3.99E-11	6.42E-11	6.34E-15	2.98E-15
158	n-Nitrosodimethylamine	9.08E-14	1.25E-11	4.82E+00	6.05E-11	4.55E-13	4.55E-13	6.09E-11	6.01E-15	2.83E-15
159	PAHs									
160	Acenaphthalene	3.62E-13	5.00E-11	8.48E-03	4.24E-13	1.81E-12	1.81E-12	2.24E-12	2.21E-16	1.04E-16
161	Acenaphthene	3.62E-13	5.00E-11	1.04E-02	5.18E-13	1.81E-12	1.81E-12	2.33E-12	2.30E-16	1.08E-16
162	Benzo(a)pyrene	7.27E-13	1.00E-10	3.68E-04	3.69E-14	3.64E-12	3.64E-12	3.68E-12	3.63E-16	1.71E-16
163	Chrysene	7.27E-14	1.00E-11	8.53E-04	8.50E-15	3.64E-13	3.64E-13	3.73E-13	3.68E-17	1.73E-17
164	Dibenz(a,h)anthracene	7.27E-13	1.00E-10	3.30E-04	3.32E-14	3.64E-12	3.64E-12	3.68E-12	3.62E-16	1.71E-16
165	Fluoranthene	7.27E-13	1.00E-10	1.83E-03	1.83E-13	3.64E-12	3.64E-12	3.83E-12	3.77E-16	1.78E-16
166	Fluorene	7.27E-14	1.00E-11	5.60E-03	5.63E-14	3.64E-13	3.64E-13	4.20E-13	4.15E-17	1.95E-17
167	Phenanthrene	2.83E-16	3.91E-14	4.35E-03	1.70E-16	1.42E-15	1.42E-15	1.59E-15	1.57E-19	7.37E-20
168	Pyrene	1.45E-12	2.01E-10	1.93E-03	3.87E-13	7.28E-12	7.28E-12	7.67E-12	7.56E-16	3.56E-16
169	Parathion	1.80E-16	2.49E-14	1.20E-02	2.98E-16	9.02E-16	9.02E-16	1.20E-15	1.18E-19	5.57E-20
170	Pentachlorobenzene	8.92E-14	1.23E-11	2.20E-03	2.71E-14	4.47E-13	4.47E-13	4.74E-13	4.68E-17	2.20E-17
171	Phenol	1.43E-15	1.97E-13	2.77E-01	5.46E-14	7.16E-15	7.16E-15	6.18E-14	6.09E-18	2.87E-18
172	Quinoline	8.19E-14	1.13E-11	1.29E-01	1.46E-12	4.10E-13	4.10E-13	1.87E-12	1.85E-16	8.69E-17
173	Tetrachlorobenzene	4.39E-14	6.06E-12	5.68E-03	3.44E-14	2.20E-13	2.20E-13	2.54E-13	2.51E-17	1.18E-17
174	Trichlorobenzene	2.22E-14	3.07E-12	9.56E-03	2.93E-14	1.11E-13	1.11E-13	1.41E-13	1.39E-17	6.53E-18
175	Unsym. dimethyl hydrazine	3.52E-10	4.86E-08	4.93E+01	2.39E-06	1.76E-09	1.76E-09	2.40E-06	2.36E-10	1.11E-10
176	Vapona	7.11E-16	9.83E-14	3.00E-01	2.95E-14	3.57E-15	3.57E-15	3.30E-14	3.26E-18	1.53E-18

117	B	C	AE	AF	AG	AH	AI	AJ	AK	AL
118	BASE CASE									
177			TABLE 11							
178	INORGANICS									
179	Arsenic		9.59E-12	1.32E-09	2.00E-03	2.65E-12	4.81E-11	5.07E-11	5.00E-15	2.35E-15
180	Cadmium		5.56E-14	7.68E-12	2.75E-02	2.11E-13	2.79E-13	4.90E-13	4.83E-17	2.27E-17
181	Mercury		3.60E-13	4.97E-11	4.50E-02	2.24E-12	1.80E-12	4.04E-12	3.98E-16	1.87E-16

ADULT	CHILD	LETUCE INGESTION RATE ,Kg/day	ADILET
1.19E-02	1.24E-03		ADWT
7.00E+01	1.55E+01	BODY WEIGHT, KG	r
1.50E-01	1.50E-01	r lettuce	k
5.78E-07	5.78E-07	k lettuce, 1/s	t
5.62E+06	5.62E+06	t lettuce, s	Y
1.58E+00	1.58E+00	Y lettuce, Kg/M2	VSDf
1.58E+05	1.58E+05	VSDf lettuce, M2s/Kg	HG
5.80E-01	5.80E-01	FRACT. CONSUMED FROM RURAL SOURCE.	secyr
3.15E+07	3.15E+07	sec/yr	mgg
1.00E+03	1.00E+03	mg/g	

$$VSDf = r * (1 - e^{-Y * K})$$

Cs = VSDf*Deposition*mgg/secyr

Cu = PUF*Cssoil

EDI = (Cs+Cu)*ADILET*HG/ADWT

Y*K

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

117 B	C	AO	AP	AQ	AR	AS	AT	AU
118	BASE CASE	TABLE 12	AP	AQ	AR	AS	AT	AU
119		CARROT CONSUMPTION - AVERAGE						
120								
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122								
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ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	AO	AP	AQ	AR	AS	AT	AU
118	BASE CASE		TABLE 12						
177									
178	INORGANICS								
179	Arsenic		1.31E-09			7.20E-04	9.40E-13	9.11E-17	1.36E-16
180	Cadmium		7.57E-12			1.80E-02	1.36E-13	1.32E-17	1.98E-17
181	Mercury		4.90E-11			2.40E-02	1.18E-12	1.14E-16	1.71E-16

ADULT CHILD
 1.42E-02 1.42E-02 SOIL ORGANIC CARBON CONTENT
 0.0117 0.00388 CARROT INGESTION RATE ,Kg/day
 7.00E+01 1.55E+01 BODY WEIGHT, KG
 5.80E-01 5.80E-01 FRACTION OF CARROTS HOMEROWN

$\log(RCF-0.82) = 0.77 \log Kow - 1.52$

$RUF = RCF$
 $(Koc * Foc)$

$C_{plant} = RUF * C_{soil}$

$EDI = C_{plant} * ADICAR * HG / ADWT$

$EDI (total) = DI_{tomato} + DI_{lettuce} + DI_{carrot}$

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ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	AW	AX	AY	AZ	BA	BB	BC
118	BASE CASE		TABLE 13						
119			CARROT CONSUMPTION - MAXIMUM						
120									
121									
122		18-Jun-91	C soil						
123		14:39:23	MAXIMUM						
124			CALCULATED						
125			CONC IN						
126			SOIL						
127			-2M						
128			mg/Kg						
129									
130	ORGANICS								
131	Acetonitrile		4.02E-09	-3.40E-01	2.20E+00	2.68E+01	1.08E-07	1.04E-11	1.56E-11
132	Aldrin		6.24E-15	7.40E+00	9.60E+04	1.11E+01	6.89E-14	6.68E-18	1.00E-17
133	Aniline		2.26E-10	9.00E-01	7.36E+01	9.28E-01	2.09E-10	2.03E-14	3.04E-14
134	Atrazine		1.40E-12	2.68E+00	3.20E+02	9.50E-01	1.33E-12	1.28E-16	1.92E-16
135	Benzaldehyde		1.03E-10	1.48E+00	1.52E+02	5.73E-01	5.89E-11	5.71E-15	8.56E-15
136	Benzofuran		5.00E-10	2.67E+00	3.13E+02	9.57E-01	4.79E-10	4.64E-14	6.95E-14
137	Benzoic Acid		5.04E-11	1.87E+00	2.48E+02	4.69E-01	2.36E-11	2.29E-15	3.43E-15
138	Carbonitrile		1.10E-09	1.50E+00	1.63E+02	5.65E-01	5.99E-10	5.81E-14	3.10E-14
139	Benzothiazole		4.69E-13	2.01E+00	2.95E+02	4.50E-01	2.11E-13	2.04E-17	3.06E-17
140	Bis(2-ethylhexyl)phthalate		2.77E-13	8.73E+00	1.34E+06	8.39E+00	2.32E-12	2.25E-16	3.37E-16
141	Carbazole		2.26E-12	3.29E+00	1.19E+03	6.57E-01	1.48E-12	1.44E-16	2.15E-16
142	4-Chloroaniline		1.29E-13	1.83E+00	3.50E+02	3.21E-01	4.15E-14	4.03E-18	6.03E-18
143	4-Chlorobiphenyl		3.18E-13	4.90E+00	3.85E+04	3.29E-01	1.05E-13	1.02E-17	1.52E-17
144	4,4'-Chlorobiphenyl		1.60E-14	5.58E+00	1.67E+05	2.53E-01	4.05E-15	3.93E-19	5.88E-19
145	Chloroethane		1.14E-11	1.49E+00	1.43E+02	6.13E-01	6.99E-12	6.78E-16	1.02E-15
146	Dibenzofuran		1.00E-11	4.12E+00	7.15E+03	4.50E-01	4.52E-12	4.38E-16	6.56E-16
147	1,2-Dichloroethane		1.16E-12	1.48E+00	1.40E+01	6.22E+00	7.19E-12	6.97E-16	1.04E-15
148	Dieldrin		1.14E-14	6.20E+00	1.70E+03	7.44E+01	8.52E-13	8.26E-17	1.24E-16
149	Hexachlorobenzene		3.03E-11	5.47E+00	5.00E+04	6.94E-01	2.10E-11	2.04E-15	3.05E-15
150	Hydrazine		3.91E-08	-3.08E+00	1.00E-01	5.78E+02	2.26E-05	2.19E-09	3.28E-09
151	Lindane		5.32E-15	3.30E+00	1.00E+03	7.97E-01	4.24E-15	4.11E-19	6.15E-19
152	Malathion		1.57E-14	2.89E+00	1.80E+03	2.31E-01	3.62E-15	3.51E-19	5.26E-19
153	Methyl ethyl ketone		1.94E-12	2.60E-01	4.50E+00	1.36E+01	2.64E-11	2.56E-15	3.83E-15
154	4-Methylphenol		1.76E-12	1.94E+00	4.90E+01	2.53E+00	4.46E-12	4.32E-16	6.47E-16
155	Monomethyl hydrazine		1.23E-08	-3.08E+00	5.03E-01	1.15E+02	1.42E-06	1.37E-10	2.06E-10
156	Naphthalene		2.08E-13	3.35E+00	8.71E+02	9.94E-01	2.07E-13	2.00E-17	3.00E-17
157	Naphthalene carbonitrile		1.10E-09	3.35E+00	8.71E+02	9.94E-01	1.09E-09	1.06E-13	1.59E-13
158	n-Nitrosodimethylamine		1.25E-11	-6.80E-01	1.00E-01	5.84E+02	7.32E-09	7.10E-13	1.06E-12
159	PAHS								
160	Acenaphthalene		5.00E-11	4.07E+00	2.50E+03	1.18E+00	5.91E-11	5.73E-15	8.58E-15
161	Acenaphthene		5.00E-11	3.92E+00	4.60E+03	4.95E-01	2.48E-11	2.40E-15	3.59E-15
162	Benzo(a)pyrene		1.00E-10	6.42E+00	5.50E+06	3.40E-02	3.41E-12	3.30E-16	4.95E-16
163	Chrysene		1.00E-11	5.79E+00	2.00E+05	3.06E-01	3.07E-12	2.98E-16	4.46E-16
164	Dibenzo(a,h)anthracene		1.00E-10	6.50E+00	3.30E+06	6.52E-02	6.55E-12	6.35E-16	9.51E-16
165	Fluoranthene		1.00E-10	5.22E+00	3.80E+04	5.87E-01	5.89E-11	5.71E-15	8.55E-15
166	Fluorene		1.00E-11	4.38E+00	7.30E+03	6.95E-01	6.98E-12	6.76E-16	1.01E-15
167	Phenanthrene		3.91E-14	4.57E+00	1.40E+04	5.06E-01	1.98E-14	1.92E-18	2.87E-18
168	Pyrene		2.01E-10	5.18E+00	3.80E+04	5.47E-01	1.10E-10	1.06E-14	1.59E-14
169	Parathion		2.49E-14	3.81E+00	3.66E+03	5.14E-01	1.28E-14	1.24E-18	1.86E-18
170	Pentachlorobenzene		1.23E-11	5.08E+00	1.30E+04	1.34E+00	1.65E-11	1.60E-15	2.40E-15
171	Phenol		1.97E-13	1.46E+00	1.40E+01	6.15E+00	1.21E-12	1.18E-16	1.76E-16
172	Quinoline		1.13E-11	2.03E+00	7.90E+01	1.72E+00	1.94E-11	1.88E-15	2.82E-15
173	Tetrachlorobenzene		6.06E-12	4.37E+00	1.60E+03	3.12E+00	1.89E-11	1.83E-15	2.74E-15
174	Trichlorobenzene		3.07E-12	3.98E+00	9.20E+03	2.75E-01	8.42E-13	8.17E-17	1.22E-16
175	Unsym. dimethyl hydrazine		4.86E-08	-2.42E+00	2.00E-01	2.89E+02	1.40E-05	1.36E-09	2.04E-09
176	Vapona		9.83E-14	1.40E+00	1.38E+02	6.03E-01	5.93E-14	5.74E-18	8.60E-18

117	B	C	AW	AX	AY	AZ	BA	BB	BC
118	BASE CASE		TABLE 13						
177									
178	INORGANICS								
179	Arsenic		1.32E-09			7.20E-04	9.54E-13	9.25E-17	1.38E-16
180	Cadmium		7.68E-12			1.80E-02	1.38E-13	1.34E-17	2.01E-17
181	Mercury		4.97E-11			2.40E-02	1.19E-12	1.16E-16	1.73E-16

ADULT CHILD
 1.42E-02 1.42E-02 SOIL ORGANIC CARBON CONTENT
 1.17E-02 3.88E-03 INGESTION RATE, Kg/day
 7.00E+01 1.55E+01 BODY WEIGHT, Kg
 5.80E-01 5.80E-01 FRACTION OF CARROTS HOMEGROWN

$$\log(RCF-0.82) = 0.77(\log Kow-1.52)$$

$$RUF = RCF$$

$$(Koc*Foc)$$

$$C_{plant} = RUF * C_{soil}$$

$$EDI = C_{plant} * ADICAR * HG / ADWT$$

$$EDI (total) = DI_{tomato} + DI_{lettuce} + DI_{carrot}$$

Foc
 ADICAR
 ADWT
 HG

191
 192
 193
 194
 195
 196

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	BE	BF	BG	BH
118	BASE CASE		TABLE 14			
119			TOTAL VEGETABLE CONSUMPTION			
120			(carrots, lettuce, and tomatoes)			
121						
122						
123						
124						
125						
126						
127						
128						
129						
18-Jun-91 14:39:23						
			AVERAGE DAILY INTAKE mg/Kg/day	MAXIMUM DAILY INTAKE mg/Kg/day	AVERAGE DAILY INTAKE mg/Kg/day	MAXIMUM DAILY INTAKE mg/Kg/day
			ADULT		CHILD	
130	ORGANICS					
131	Acetonitrile		1.92E-11	1.95E-11	3.42E-11	3.48E-11
132	Aldrin		6.59E-18	6.76E-18	9.87E-18	1.02E-17
133	Aniline		1.16E-13	1.20E-13	2.33E-13	2.41E-13
134	Atrazine		1.82E-16	2.02E-16	3.07E-16	3.44E-16
135	Benzaldehyde		2.58E-14	2.74E-14	5.10E-14	5.42E-14
136	Benzofuran		6.59E-14	7.32E-14	1.11E-13	1.24E-13
137	Benzoic Acid		8.12E-15	8.88E-15	1.58E-14	1.72E-14
138	Benzonitrile		2.50E-13	2.68E-13	4.95E-13	5.28E-13
139	Benzothiazole		6.54E-17	7.23E-17	1.26E-16	1.39E-16
140	Bis(2-ethylhexyl)phthalate		2.22E-16	2.29E-16	3.32E-16	3.44E-16
141	Carbazole		1.82E-16	2.13E-16	2.97E-16	3.55E-16
142	4-Chloroaniline		1.98E-17	2.18E-17	3.95E-17	4.31E-17
143	4-Chlorobiphenyl		1.08E-17	1.50E-17	1.66E-17	2.44E-17
144	4,4'-Chlorobiphenyl		2.87E-19	6.17E-19	6.18E-19	1.01E-18
145	Chloroethane		2.07E-15	3.06E-15	5.66E-15	6.01E-15
146	Dibenzofuran		4.94E-16	6.29E-16	7.76E-16	1.02E-15
147	1,2-Dichloroethane		9.13E-16	9.41E-16	1.51E-15	1.56E-15
148	Dieldrin		8.14E-17	8.27E-17	1.22E-16	1.24E-16
149	Hexachlorobenzene		2.05E-15	2.46E-15	3.09E-15	3.85E-15
150	Hydrazine		5.53E-09	5.61E-09	1.04E-08	1.05E-08
151	Lindane		4.98E-19	5.74E-19	8.04E-19	9.41E-19
152	Malathion		8.19E-19	1.03E-18	1.52E-18	1.91E-18
153	Methyl ethyl ketone		4.45E-15	4.54E-15	7.86E-15	8.02E-15
154	4-Methylphenol		6.13E-16	6.44E-16	1.03E-15	1.09E-15
155	Monomethyl hydrazine		1.20E-09	1.22E-09	2.45E-09	2.49E-09
156	Naphthalene		2.32E-17	2.61E-17	3.68E-17	4.22E-17
157	Naphthalene carbonitrile		1.22E-13	1.38E-13	1.94E-13	2.23E-13
158	n-Nitrosodimethylamine		7.43E-13	7.54E-13	1.14E-12	1.16E-12
159	PAHs					
160	Acenaphthalene		5.97E-15	6.70E-15	9.14E-15	1.05E-14
161	Acenaphthene		2.76E-15	3.44E-15	4.37E-15	5.62E-15
162	Benzo(a)pyrene		3.90E-16	1.68E-15	6.14E-16	3.00E-15
163	Chrysene		3.03E-16	4.36E-16	4.59E-16	7.04E-16
164	Dibenzo(a,h)anthracene		6.87E-16	1.98E-15	1.06E-15	3.45E-15
165	Fluoranthene		5.80E-15	7.17E-15	8.78E-15	1.13E-14
166	Fluorene		7.11E-16	8.50E-16	1.09E-15	1.35E-15
167	Phenanthrene		2.03E-18	2.56E-18	3.12E-18	4.09E-18
168	Pyrene		1.08E-14	1.36E-14	1.64E-14	2.14E-14
169	Parathion		1.45E-18	1.79E-18	2.30E-18	2.93E-18
170	Pentachlorobenzene		1.60E-15	1.78E-15	2.41E-15	2.74E-15
171	Phenol		1.56E-16	1.60E-16	2.57E-16	2.66E-16
172	Quinoline		2.92E-15	3.10E-15	5.02E-15	5.37E-15
173	Tetrachlorobenzene		1.83E-15	1.94E-15	2.76E-15	2.94E-15
174	Trichlorobenzene		1.03E-16	1.44E-16	1.68E-16	2.43E-16
175	Unsym. dimethyl hydrazine		3.08E-09	3.12E-09	5.68E-09	5.76E-09
176	Vapona		2.71E-17	2.87E-17	5.37E-17	5.68E-17

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-JUN-91

117 B	C	BE	BF	BG	BH
118 BASE CASE		TABLE 14			
177					
178 INORGANICS					
179 Arsenic		1.10E-15	1.80E-14	1.77E-15	3.31E-14

117 118 119 120 121 122 123 124 125 126 127 128 129	B BASE CASE	C	TABLE 15 SOIL/DUST INGESTION CHILD	18-Jun-91 14:39:23			18-Jun-91 14:39:23			18-Jun-91 14:39:23		
				BJ	BK	BL	BM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE
				C soil CALCULATED CONC IN SOIL -1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL -1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL -1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL -1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL -1M mg/Kg
130	ORGANICS											
131	Acetonitrile			7.92E-09	1.02E-13	8.03E-09	1.04E-13	7.92E-09	1.02E-13	8.03E-09	1.04E-13	7.92E-09
132	Aldrin			1.23E-14	1.59E-19	1.25E-14	1.61E-19	1.23E-14	1.59E-19	1.25E-14	1.61E-19	1.23E-14
133	Aniline			4.45E-10	5.74E-15	4.52E-10	5.83E-15	4.45E-10	5.74E-15	4.52E-10	5.83E-15	4.45E-10
134	Atrazine			2.75E-12	3.55E-17	2.79E-12	3.60E-17	2.75E-12	3.55E-17	2.79E-12	3.60E-17	2.75E-12
135	Benzaldehyde			2.03E-10	2.62E-15	2.06E-10	2.65E-15	2.03E-10	2.62E-15	2.06E-10	2.65E-15	2.03E-10
136	Benzofuran			9.86E-10	1.27E-14	1.00E-09	1.29E-14	9.86E-10	1.27E-14	1.00E-09	1.29E-14	9.86E-10
137	Benzoic Acid			9.93E-11	1.28E-15	1.01E-10	1.30E-15	9.93E-11	1.28E-15	1.01E-10	1.30E-15	9.93E-11
138	Benzonitrile			2.17E-09	2.80E-14	2.20E-09	2.84E-14	2.17E-09	2.80E-14	2.20E-09	2.84E-14	2.17E-09
139	Benzothiazole			9.24E-13	1.19E-17	9.37E-13	1.21E-17	9.24E-13	1.19E-17	9.37E-13	1.21E-17	9.24E-13
140	Bis(2-ethylhexyl)phthalate			5.45E-13	7.03E-18	5.53E-13	7.14E-18	5.45E-13	7.03E-18	5.53E-13	7.14E-18	5.45E-13
141	Carbazole			4.45E-12	5.74E-17	4.52E-12	5.83E-17	4.45E-12	5.74E-17	4.52E-12	5.83E-17	4.45E-12
142	4-Chloroaniline			2.55E-13	3.29E-18	2.59E-13	3.34E-18	2.55E-13	3.29E-18	2.59E-13	3.34E-18	2.55E-13
143	4-Chlorobiphenyl			6.28E-13	8.10E-18	6.37E-13	8.22E-18	6.28E-13	8.10E-18	6.37E-13	8.22E-18	6.28E-13
144	4,4'-Chlorobiphenyl			3.16E-14	4.08E-19	3.21E-14	4.14E-19	3.16E-14	4.08E-19	3.21E-14	4.14E-19	3.16E-14
145	Chloroethane			2.25E-11	2.90E-16	2.28E-11	2.95E-16	2.25E-11	2.90E-16	2.28E-11	2.95E-16	2.25E-11
146	Dibenzofuran			1.98E-11	2.55E-16	2.01E-11	2.59E-16	1.98E-11	2.55E-16	2.01E-11	2.59E-16	1.98E-11
147	1,2-Dichloroethane			2.28E-12	2.94E-17	2.31E-12	2.98E-17	2.28E-12	2.94E-17	2.31E-12	2.98E-17	2.28E-12
148	Dieldrin			2.26E-14	2.91E-19	2.29E-14	2.95E-19	2.26E-14	2.91E-19	2.29E-14	2.95E-19	2.26E-14
149	Hexachlorobenzene			5.97E-11	7.70E-16	6.05E-11	7.81E-16	5.97E-11	7.70E-16	6.05E-11	7.81E-16	5.97E-11
150	Hydrazine			7.71E-08	9.95E-13	7.82E-08	1.01E-12	7.71E-08	9.95E-13	7.82E-08	1.01E-12	7.71E-08
151	Lindane			1.05E-14	1.35E-19	1.06E-14	1.37E-19	1.05E-14	1.35E-19	1.06E-14	1.37E-19	1.05E-14
152	Malathion			3.10E-14	4.00E-19	3.14E-14	4.05E-19	3.10E-14	4.00E-19	3.14E-14	4.05E-19	3.10E-14
153	Methyl ethyl ketone			3.83E-12	4.94E-17	3.88E-12	5.01E-17	3.83E-12	4.94E-17	3.88E-12	5.01E-17	3.83E-12
154	4-Methylphenol			3.47E-12	4.48E-17	3.52E-12	4.55E-17	3.47E-12	4.48E-17	3.52E-12	4.55E-17	3.47E-12
155	Monomethyl hydrazine			2.43E-08	3.14E-13	2.47E-08	3.18E-13	2.43E-08	3.14E-13	2.47E-08	3.18E-13	2.43E-08
156	Naphthalene			4.10E-13	5.29E-18	4.16E-13	5.36E-18	4.10E-13	5.29E-18	4.16E-13	5.36E-18	4.10E-13
157	Naphthalene carbonitrile			2.17E-09	2.80E-14	2.20E-09	2.84E-14	2.17E-09	2.80E-14	2.20E-09	2.84E-14	2.17E-09
158	n-Nitrosodimethylamine			2.47E-11	3.19E-16	2.51E-11	3.24E-16	2.47E-11	3.19E-16	2.51E-11	3.24E-16	2.47E-11
159	PAHs											
160	Acenaphthalene			9.86E-11	1.27E-15	1.00E-10	1.29E-15	9.86E-11	1.27E-15	1.00E-10	1.29E-15	9.86E-11
161	Acenaphthene			9.86E-11	1.27E-15	1.00E-10	1.29E-15	9.86E-11	1.27E-15	1.00E-10	1.29E-15	9.86E-11
162	Benzo(a)pyrene			1.98E-10	2.55E-15	2.01E-10	2.59E-15	1.98E-10	2.55E-15	2.01E-10	2.59E-15	1.98E-10
163	Chrysene			1.98E-11	2.55E-16	2.01E-11	2.59E-16	1.98E-11	2.55E-16	2.01E-11	2.59E-16	1.98E-11
164	Dibenzo(a,h)anthracene			1.98E-10	2.55E-15	2.01E-10	2.59E-15	1.98E-10	2.55E-15	2.01E-10	2.59E-15	1.98E-10
165	Fluoranthene			1.98E-10	2.55E-15	2.01E-10	2.59E-15	1.98E-10	2.55E-15	2.01E-10	2.59E-15	1.98E-10
166	Fluorene			1.98E-11	2.55E-16	2.01E-11	2.59E-16	1.98E-11	2.55E-16	2.01E-11	2.59E-16	1.98E-11
167	Phenanthrene			7.71E-14	9.95E-19	7.82E-14	1.01E-18	7.71E-14	9.95E-19	7.82E-14	1.01E-18	7.71E-14
168	Pyrene			3.96E-10	5.11E-15	4.02E-10	5.18E-15	3.96E-10	5.11E-15	4.02E-10	5.18E-15	3.96E-10
169	Parathion			4.90E-14	6.33E-19	4.97E-14	6.42E-19	4.90E-14	6.33E-19	4.97E-14	6.42E-19	4.90E-14
170	Pentachlorobenzene			2.43E-11	3.14E-16	2.47E-11	3.18E-16	2.43E-11	3.14E-16	2.47E-11	3.18E-16	2.43E-11
171	Phenol			3.89E-13	5.02E-18	3.95E-13	5.09E-18	3.89E-13	5.02E-18	3.95E-13	5.09E-18	3.89E-13
172	Quinoline			2.23E-11	2.88E-16	2.26E-11	2.92E-16	2.23E-11	2.88E-16	2.26E-11	2.92E-16	2.23E-11
173	Tetrachlorobenzene			1.19E-11	1.54E-16	1.21E-11	1.56E-16	1.19E-11	1.54E-16	1.21E-11	1.56E-16	1.19E-11
174	Trichlorobenzene			6.05E-12	7.81E-17	6.14E-12	7.92E-17	6.05E-12	7.81E-17	6.14E-12	7.92E-17	6.05E-12
175	Unsym. dimethyl hydrazine			9.58E-08	1.24E-12	9.72E-08	1.25E-12	9.58E-08	1.24E-12	9.72E-08	1.25E-12	9.58E-08
176	Vapona			1.94E-13	2.50E-18	1.97E-13	2.54E-18	1.94E-13	2.50E-18	1.97E-13	2.54E-18	1.94E-13

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-JUN-91

117	B	C	BJ	BK	BL	BM
118	BASE CASE					
177		TABLE 15				
178	INORGANICS					
179	Arsenic	2.61E-09	3.37E-14	2.65E-09	3.42E-14	
180	Cadmium	1.51E-11	1.95E-16	1.54E-11	1.98E-16	
181	Mercury	9.79E-11	1.26E-15	9.93E-11	1.28E-15	

0.2 Soil/dust ingestion rate (g/day)
 15.5 Body weight (Kg)
 365 days/yr
 365000 g/Kg*day/yr

$$EDI = C_{soil} * SIR * EF / BW / CF$$

117 118 119 120 121 122 123 124 125 126 127 128 129	B	BASE CASE	C	TABLE 16 SOIL INGESTION ADULT				BR				
				BO	BP	BQ						
									C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day
18-Jun-91 14:39:23												
130	ORGANICS											
131	Acetonitrile			7.92E-09	1.13E-14	8.03E-09	1.15E-14					
132	Aldrin			1.23E-14	1.76E-20	1.25E-14	1.78E-20					
133	Aniline			4.45E-10	6.36E-16	4.52E-10	6.45E-16					
134	Atrazine			2.75E-12	3.93E-18	2.79E-12	3.99E-18					
135	Benzaldehyde			2.03E-10	2.90E-16	2.06E-10	2.94E-16					
136	Benzofuran			9.86E-10	1.41E-15	1.00E-09	1.43E-15					
137	Benzoic Acid			9.93E-11	1.42E-16	1.01E-10	1.44E-16					
138	Benzonitrile			2.17E-09	3.10E-15	2.20E-09	3.14E-15					
139	Benzothiazole			9.24E-13	1.32E-18	9.37E-13	1.34E-18					
140	Bis(2-ethylhexyl)phthalate			5.45E-13	7.79E-19	5.53E-13	7.90E-19					
141	Carbazole			4.45E-12	6.36E-18	4.52E-12	6.45E-18					
142	4-Chloroaniline			2.55E-13	3.64E-19	2.59E-13	3.69E-19					
143	4-Chlorobiphenyl			6.28E-13	8.97E-19	6.37E-13	9.10E-19					
144	4,4'-Chlorobiphenyl			3.16E-14	4.51E-20	3.21E-14	4.58E-20					
145	Chloroethane			2.25E-11	3.21E-17	2.28E-11	3.26E-17					
146	Dibenzofuran			1.98E-11	2.83E-17	2.01E-11	2.87E-17					
147	1,2-Dichloroethane			2.28E-12	3.25E-18	2.31E-12	3.30E-18					
148	Dieldrin			2.26E-14	3.22E-20	2.29E-14	3.27E-20					
149	Hexachlorobenzene			5.97E-11	8.52E-17	6.05E-11	8.65E-17					
150	Hydrazine			7.71E-08	1.10E-13	7.82E-08	1.12E-13					
151	Lindane			1.05E-14	1.50E-20	1.06E-14	1.52E-20					
152	Malathion			3.10E-14	4.42E-20	3.14E-14	4.49E-20					
153	Methyl ethyl ketone			3.83E-12	5.47E-18	3.88E-12	5.55E-18					
154	4-Methylphenol			3.47E-12	4.96E-18	3.52E-12	5.03E-18					
155	Monomethyl hydrazine			2.43E-08	3.47E-14	2.47E-08	3.52E-14					
156	Naphthalene			4.10E-13	5.85E-19	4.16E-13	5.94E-19					
157	Naphthalene carbonitrile			2.17E-09	3.10E-15	2.20E-09	3.14E-15					
158	n-Nitrosodimethylamine			2.47E-11	3.53E-17	2.51E-11	3.58E-17					
159	PAHs											
160	Acenaphthalene			9.86E-11	1.41E-16	1.00E-10	1.43E-16					
161	Acenaphthene			9.86E-11	1.41E-16	1.00E-10	1.43E-16					
162	Benzo(a)pyrene			1.98E-10	2.83E-16	2.01E-10	2.87E-16					
163	Chrysene			1.98E-11	2.83E-17	2.01E-11	2.87E-17					
164	Dibenzo(a,h)anthracene			1.98E-10	2.83E-16	2.01E-10	2.87E-16					
165	Fluoranthene			1.98E-10	2.83E-16	2.01E-10	2.87E-16					
166	Fluorene			1.98E-11	2.83E-17	2.01E-11	2.87E-17					
167	Phenanthrene			7.71E-14	1.10E-19	7.82E-14	1.12E-19					
168	Pyrene			3.96E-10	5.66E-16	4.02E-10	5.74E-16					
169	Parathion			4.90E-14	7.00E-20	4.97E-14	7.11E-20					
170	Pentachlorobenzene			2.43E-11	3.47E-17	2.47E-11	3.52E-17					
171	Phenol			3.89E-13	5.56E-19	3.95E-13	5.64E-19					
172	Quinoline			2.23E-11	3.18E-17	2.26E-11	3.23E-17					
173	Tetrachlorobenzene			1.19E-11	1.71E-17	1.21E-11	1.73E-17					
174	Trichlorobenzene			6.05E-12	8.64E-18	6.14E-12	8.77E-18					
175	Unsym. dimethyl hydrazine			9.58E-08	1.37E-13	9.72E-08	1.39E-13					
176	Vapona			1.94E-13	2.77E-19	1.97E-13	2.81E-19					

117 B	C	BO	BP	BQ	BR
118 BASE CASE					
177		TABLE 16			
178 INORGANICS					
179 Arsenic		2.61E-09	3.73E-15	2.65E-09	3.78E-15
180 Cadmium		1.51E-11	2.16E-17	1.54E-11	2.19E-17
181 Mercury		9.79E-11	1.40E-16	9.93E-11	1.42E-16
182					
183					
184					
185					
186					
187					
188					
189					
190					
191					
192					
193					

0.1 Soil ingestion rate (g/day)
70 Body weight (Kg)
365 days/yr
365000 g/Kg*day/yr

$$EDI = C_{soil} * SIR * EF / BW / CF$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

202	B	C	D	E			F	G	H
				CONCENTRATION IN GRAIN					
203	BASE CASE	18-Jun-91 14:39:23	TABLE 17 CONTAMINANT CONCENTRATION IN GRAIN			PUF	AVERAGE CALCULATED CONC. IN GRAIN mg/Kg	Cu MAXIMUM CALCULATED CONC. IN GRAIN mg/Kg	
204			C soil AVERAGE CALCULATED CONC IN SOIL -2M mg/Kg	C soil MAXIMUM CALCULATED CONC IN SOIL -2M mg/Kg	PLANT UPTAKE FACTOR				
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ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

202	B	C	D	E	F	G	H
203	BASE CASE		TABLE 17				
262	INORGANICS						
263	Arsenic		7.80E-10	7.92E-10	3.30E-03	2.57E-12	2.61E-12
264	Cadmium		4.52E-12	4.59E-12	1.00E-01	4.52E-13	4.59E-13
265	Mercury		2.93E-11	2.97E-11	2.00E-01	5.85E-12	5.94E-12

Cgrain = Csoil*RUF

266
267
268

TABLE 18
CONTAMINANT CONCENTRATION IN HAY mg/Kg

B	C	J	K	L	M	N	O	P	Q	R	S
202	BASE CASE	TABLE 18	CONCENTRATION	IN HAY	mg/Kg						
203		CONTAMINANT									
204											
205											
206											
207											
208	18-Jun-91	C soil	C soil	D	PUF	Cu	Cu	Cs	Cs	C hay	C hay
209	14:39:23	AVERAGE	MAXIMUM	DEPOSITION	PLANT UPTAKE	CONC. DUE	CONC. DUE	AVERAGE	ON	AVERAGE	MAXIMUM
210		CONC IN	CONC IN	RATE	FACTOR	TO	TO	CONC. ON	SURFACE	CONC IN	CONC IN
211		SOIL	SOIL	g/m2/yr		UPTAKE	UPTAKE	PLANT	HAZ	HAZ	HAZ
212		.2M	.2M			mg/Kg	mg/Kg	SURFACE	mg/Kg	mg/Kg	mg/Kg
213		mg/Kg	mg/Kg								
214	ORGANICS										
215	Acetonitrile	2.37E-09	2.40E-09	5.76E-11	6.13E+01	1.45E-07	1.45E-07	1.30E-10	4.55E-09	1.45E-07	1.52E-07
216	Aldrin	3.67E-15	3.73E-15	8.94E-17	1.99E-03	7.29E-18	7.29E-18	2.02E-16	7.06E-15	2.09E-16	7.07E-15
217	Aniline	1.33E-10	1.35E-10	3.24E-12	1.17E+01	1.56E-09	1.56E-09	7.31E-12	2.56E-10	1.56E-09	1.83E-09
218	Atrazine	8.22E-13	8.34E-13	2.00E-14	1.09E+00	8.92E-13	8.92E-13	4.51E-12	1.58E-12	9.37E-13	9.37E-13
219	Benzaldehyde	6.06E-11	6.15E-11	1.47E-12	5.39E+00	3.27E-10	3.27E-10	3.31E-10	1.16E-10	3.30E-10	4.48E-10
220	Benzo(a)pyrene	2.95E-10	2.99E-10	7.17E-12	1.10E+00	3.24E-10	3.24E-10	1.62E-11	5.66E-10	3.40E-10	8.95E-10
221	Benzoic Acid	2.97E-11	3.01E-11	7.22E-13	3.20E+00	9.50E-11	9.50E-11	1.63E-11	1.70E-11	9.66E-11	1.53E-10
222	Benzonitrile	6.47E-10	6.57E-10	1.58E-11	4.84E+00	3.14E-09	3.14E-09	3.56E-11	1.24E-09	3.17E-09	4.43E-09
223	Benzothiazole	2.76E-13	2.80E-13	6.72E-15	2.66E+00	7.33E-13	7.33E-13	1.52E-14	5.31E-13	7.48E-13	1.27E-12
224	Bis(2-ethylhexyl)phthalate	1.63E-13	1.65E-13	3.96E-15	3.36E-04	5.48E-17	5.48E-17	8.95E-15	3.13E-13	9.00E-15	3.13E-13
225	Carbazole	1.33E-12	1.35E-12	3.24E-14	4.81E-01	6.39E-13	6.39E-13	7.31E-14	2.56E-12	7.12E-13	3.21E-12
226	4-Chloroaniline	7.62E-14	7.73E-14	1.85E-15	3.38E+00	2.57E-13	2.57E-13	4.18E-15	1.46E-13	2.61E-13	4.07E-13
227	4-Chlorobiphenyl	1.88E-13	1.90E-13	4.57E-15	5.60E-02	1.05E-14	1.05E-14	5.19E-16	3.61E-13	2.08E-14	3.71E-13
228	4,4'-Chlorobiphenyl	9.44E-15	9.58E-15	2.30E-16	2.26E-02	2.13E-16	2.13E-16	1.07E-14	1.81E-14	7.32E-16	1.84E-14
229	Chloroethane	6.72E-12	6.82E-12	1.64E-13	5.32E+00	3.58E-11	3.58E-11	3.69E-11	1.29E-11	3.61E-11	4.92E-11
230	Dibenzofuran	5.91E-12	6.00E-12	1.44E-13	1.59E-01	9.38E-13	9.38E-13	3.25E-13	1.14E-11	1.26E-12	1.23E-11
231	1,2-Dichloroethane	6.81E-13	6.91E-13	1.66E-14	5.39E+00	3.67E-12	3.67E-12	3.72E-12	1.31E-12	3.71E-12	5.03E-12
232	Dieldrin	6.47E-15	6.57E-15	1.64E-16	9.86E-03	6.65E-17	6.65E-17	3.70E-16	1.30E-14	4.37E-16	1.30E-14
233	Hexachlorobenzene	1.78E-11	1.81E-11	4.34E-13	2.61E-02	4.66E-13	4.66E-13	9.79E-13	3.43E-11	1.44E-12	3.47E-11
234	Hydrazine	2.30E-08	2.34E-08	5.61E-10	2.38E+03	5.48E-05	5.48E-05	1.27E-09	4.43E-08	5.48E-05	5.56E-05
235	Lindane	3.13E-15	3.18E-15	7.63E-17	4.74E-01	1.49E-15	1.49E-15	1.72E-16	6.02E-15	1.66E-15	7.53E-15
236	Malathion	9.26E-15	9.39E-15	2.23E-16	8.20E-01	7.59E-15	7.59E-15	5.08E-16	1.78E-14	2.55E-14	2.55E-14
237	Methyl ethyl ketone	1.14E-12	1.16E-12	2.78E-14	2.75E+01	3.14E-11	3.14E-11	2.20E-12	2.20E-12	3.15E-11	3.41E-11
238	4-Methylphenol	1.04E-12	1.05E-12	2.53E-14	2.92E+00	3.03E-12	3.03E-12	5.70E-14	2.09E-12	3.08E-12	3.41E-11
239	Monomethyl hydrazine	7.26E-09	7.37E-09	1.73E-10	2.38E+03	1.73E-05	1.73E-05	3.99E-12	1.40E-08	1.73E-05	5.06E-12
240	Naphthalene	1.22E-13	1.24E-13	2.98E-15	4.44E-01	5.43E-14	5.43E-14	6.72E-15	2.35E-13	6.10E-14	2.90E-13
241	Naphthalene carbonitrile	6.47E-10	6.57E-10	1.58E-11	4.44E-01	2.87E-10	2.87E-10	3.56E-11	1.24E-09	3.23E-10	1.54E-09
242	n-Nitrosodimethylamine	7.39E-12	7.49E-12	1.80E-13	9.65E+01	7.13E-10	7.13E-10	4.06E-13	1.42E-11	7.13E-10	7.37E-10
243	PAHs										
244	Acenaphthalene	2.95E-11	2.99E-11	7.17E-13	1.70E-01	5.00E-12	5.00E-12	1.62E-12	5.66E-11	6.62E-12	6.17E-11
245	Acenaphthene	2.95E-11	2.99E-11	7.17E-13	2.07E-01	6.11E-12	6.11E-12	1.62E-12	5.66E-11	7.72E-12	6.28E-11
246	Benzo(a)pyrene	5.91E-11	6.00E-11	1.44E-12	7.35E-03	4.35E-13	4.35E-13	3.25E-12	1.14E-10	3.68E-12	1.14E-10
247	Chrysene	5.91E-12	6.00E-12	1.44E-13	1.71E-02	1.01E-13	1.01E-13	3.25E-13	1.14E-11	4.26E-13	1.15E-11
248	Dibenzo(a,h)anthracene	5.91E-11	6.00E-11	1.44E-12	6.61E-03	3.91E-13	3.91E-13	3.25E-12	1.14E-10	3.64E-12	1.14E-10
249	Fluoranthene	5.91E-11	6.00E-11	1.44E-12	3.65E-02	2.16E-12	2.16E-12	3.25E-12	1.14E-10	5.41E-12	1.16E-10
250	Fluorene	5.91E-12	6.00E-12	1.44E-13	1.12E-01	6.63E-13	6.63E-13	3.25E-13	1.14E-11	9.88E-13	1.20E-11
251	Phenanthrene	2.30E-14	2.34E-14	5.61E-16	8.70E-02	2.00E-15	2.00E-15	1.27E-15	4.43E-14	3.27E-15	4.63E-14
252	Pyrene	1.18E-10	1.20E-10	2.88E-12	3.85E-02	4.59E-12	4.59E-12	6.50E-12	2.27E-10	1.11E-11	2.32E-10
253	Parathion	1.47E-14	1.49E-14	3.57E-16	2.40E-01	3.52E-15	3.52E-15	8.05E-16	2.82E-14	4.32E-15	3.17E-14
254	Pentachlorobenzene	7.26E-12	7.37E-12	1.77E-13	4.40E-02	3.20E-13	3.20E-13	3.99E-13	1.40E-11	7.19E-13	1.43E-11
255	Phenol	1.16E-13	1.18E-13	2.83E-15	5.54E+00	6.43E-13	6.43E-13	6.38E-15	2.23E-13	6.50E-13	8.76E-13
256	Quinoline	6.65E-12	6.76E-12	1.62E-13	2.59E+00	1.72E-11	1.72E-11	3.66E-13	1.28E-11	1.76E-11	3.03E-11
257	Tetrachlorobenzene	3.57E-12	3.62E-12	8.69E-14	1.14E-01	4.05E-13	4.05E-13	1.96E-13	6.86E-12	6.01E-13	7.27E-12
258	Trichlorobenzene	1.81E-12	1.83E-12	4.40E-14	1.91E-01	3.46E-13	3.46E-13	9.93E-14	3.47E-12	4.45E-13	3.82E-12
259	Unsym. dimethyl hydrazine	2.86E-08	2.91E-08	6.97E-10	9.85E+02	2.82E-05	2.82E-05	1.57E-09	5.50E-08	2.82E-05	2.87E-05
260	Vapona	5.79E-14	5.87E-14	1.41E-15	6.00E+00	3.47E-13	3.47E-13	3.18E-15	1.11E-13	3.50E-13	4.64E-13
261											

202	B	C	J	K	L	M	N	O	P	Q	R	S
203	BASE CASE		TABLE 18									
262	INORGANICS											
263	Arsenic		7.80E-10	7.92E-10	1.90E-11	2.00E-01	1.56E-10	1.58E-10	4.29E-11	1.50E-09	1.99E-10	1.66E-09
264	Cadmium		4.52E-12	4.59E-12	1.10E-13	5.50E-01	2.49E-12	2.52E-12	2.48E-13	8.70E-12	2.74E-12	1.12E-11
265	Mercury		2.93E-11	2.97E-11	7.12E-13	2.30E-01	6.73E-12	6.83E-12	1.61E-12	5.62E-11	8.34E-12	6.31E-11
266							6.35E-01 r hay					
267							5.78E-07 k hay, 1/s					
268							2.72E+06 t hay, s					
269							3.50E-01 Y hay, Kg/M2					
270							2.49E+06 SDF hay, sec*mg/Kg					
271							3.15E+07 sec/yr					
272							1.00E+03 mg/g					
273												
274												
275												
276												
277												
278												
279												
280												
281												

$SDF = r * (1 - e^{-kt})$
 $Y * K$
 $Cs = SDF * Deposition * mgg / secyr$
 $Cu = RUF * Csoil$
 $C hay = Cs + Cu$

202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261	B	C	BASE CASE	U	V	W	X	Y	Z	AA	AB	AC	AD	18-Jun-91 14:39:23	CONTAMINANT CONCENTRATION IN CORN SILAGE mg/Kg																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
															C soil AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	C soil MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	D DRY DEPOSITION RATE g/M2/yr	PUF	Cu AVERAGE CONC.DUE TO UPTAKE mg/Kg	Cu MAXIMUM CONC.DUE TO UPTAKE mg/Kg	Cs AVERAGE CONC. ON PLANT SURFACE mg/Kg	Cs MAXIMUM CONC. ON PLANT SURFACE mg/Kg	C corn AVERAGE CALCULATED CONC IN CORN SILAGE mg/Kg	C corn MAXIMUM CALCULATED CONC IN CORN SILAGE mg/Kg																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
															ORGANICS	2.37E-09	2.40E-09	5.76E-11	6.13E+01	1.45E-07	1.47E-07	2.21E-11	7.72E-10	1.45E-07	1.48E-07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Acetonitrile	3.67E-15	3.73E-15	8.94E-17	1.99E-03	7.29E-18	3.42E-17	1.20E-15	4.15E-17	4.15E-17	1.21E-15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Aldrin	1.33E-10	1.35E-10	3.24E-12	1.17E+01	1.56E-09	1.24E-12	4.34E-11	1.56E-09	1.56E-09	1.62E-09																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Aniline	8.22E-13	8.34E-13	2.00E-14	1.09E+00	8.92E-13	9.05E-13	7.66E-15	2.68E-13	9.00E-13	1.17E-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Atrazine	6.06E-11	6.15E-11	1.47E-12	5.39E+00	3.27E-10	3.31E-10	5.65E-13	1.98E-11	3.27E-10	3.51E-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Benzaldehyde	2.95E-10	2.99E-10	7.17E-12	1.10E+00	3.24E-10	3.29E-10	2.75E-12	9.61E-11	3.27E-10	4.25E-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Benzofuran	2.97E-11	3.01E-11	7.22E-13	3.20E+00	9.50E-11	9.64E-11	2.77E-13	9.68E-12	9.53E-11	1.06E-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Benzoic Acid	6.47E-10	6.57E-10	1.58E-11	4.84E+00	3.14E-09	3.18E-09	6.03E-12	2.11E-10	3.14E-09	3.39E-09																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Benzonitrile	2.76E-13	2.80E-13	6.72E-15	2.66E+00	7.33E-13	7.44E-13	2.57E-15	9.00E-14	7.35E-13	8.34E-13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Benzothiazole	1.63E-13	1.65E-13	3.96E-15	3.36E-04	5.48E-17	5.56E-17	1.52E-15	5.31E-14	1.57E-15	5.32E-14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Bis(2-ethylhexyl)phthalate	1.33E-12	1.35E-12	3.24E-14	4.81E-01	6.39E-13	6.49E-13	1.24E-14	4.34E-13	6.52E-13	1.08E-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Carbazole	7.62E-14	7.73E-14	1.85E-15	3.38E+00	2.57E-13	2.61E-13	7.10E-16	2.48E-14	2.58E-13	2.86E-13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															4-Chloroaniline	1.88E-13	1.90E-13	4.57E-15	5.60E-02	1.05E-14	1.07E-14	1.75E-15	6.12E-14	1.22E-14	7.19E-14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															4-Chlorobiphenyl	9.44E-15	9.58E-15	2.30E-16	2.26E-02	2.13E-16	2.16E-16	8.80E-17	3.08E-15	3.01E-16	3.30E-15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															4,4'-Chlorobiphenyl	6.72E-12	6.82E-12	1.64E-13	5.32E+00	3.58E-11	3.63E-11	6.27E-14	2.19E-12	3.58E-11	3.85E-11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Chloroethane	5.91E-12	6.00E-12	1.44E-13	1.59E-01	9.38E-13	9.52E-13	5.51E-14	1.93E-12	9.93E-13	2.88E-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Dibenzofuran	6.81E-13	6.91E-13	1.66E-14	5.39E+00	3.67E-12	3.72E-12	6.34E-15	2.22E-13	3.67E-12	3.94E-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															1,2-Dichloroethane	6.74E-15	6.84E-15	1.64E-16	9.86E-03	6.65E-17	6.75E-17	6.29E-17	2.20E-15	1.29E-16	2.27E-15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Dieldrin	1.78E-11	1.81E-11	4.34E-13	2.61E-02	4.66E-13	4.73E-13	1.66E-13	5.82E-12	6.32E-13	6.29E-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Hexachlorobenzene	2.30E-08	2.34E-08	5.61E-10	2.38E+03	5.48E-05	5.56E-05	2.15E-10	7.51E-09	5.48E-05	5.56E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Hydrazine	3.13E-15	3.18E-15	7.63E-17	4.74E-01	1.49E-15	1.51E-15	2.92E-17	1.02E-15	1.52E-15	2.53E-15																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Lindane	9.26E-15	9.39E-15	2.25E-16	8.20E-01	7.59E-15	7.70E-15	8.63E-17	3.02E-15	7.67E-15	1.07E-14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Malathion	1.14E-12	1.16E-12	2.78E-14	2.75E+01	3.14E-11	3.19E-11	1.07E-14	3.73E-13	3.14E-11	3.23E-11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Methyl ethyl ketone	1.04E-12	1.05E-12	2.53E-14	2.92E+00	3.03E-12	3.07E-12	9.67E-15	3.38E-13	3.04E-12	3.41E-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															4-Methylphenol	7.26E-09	7.37E-09	1.77E-10	2.38E+03	1.73E-05	1.75E-05	6.77E-11	2.37E-09	1.73E-05	1.75E-05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Monomethyl hydrazine	1.22E-13	1.24E-13	2.98E-15	4.44E-01	5.43E-14	5.51E-14	1.14E-15	3.99E-14	5.54E-14	9.50E-14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Naphthalene	6.47E-10	6.57E-10	1.58E-11	4.44E-01	2.87E-10	2.91E-10	6.03E-12	2.11E-10	2.93E-10	5.03E-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															Naphthalene carbonitrile	7.39E-12	7.49E-12	1.80E-13	9.65E+01	7.13E-10	7.23E-10	6.89E-14	2.41E-12	7.13E-10	7.25E-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
															n-Nitrosodimethylamine																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

ORGANICS

PAHs

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

202	B	C	U	V	W	X	Y	Z	AA	AB	AC	AD
203	BASE CASE		TABLE 19									
262	INORGANICS											
263	Arsenic		7.80E-10	7.92E-10	1.90E-11	2.30E-01	1.79E-10	1.82E-10	7.27E-12	2.55E-10	1.87E-10	4.37E-10
264	Cadmium		4.52E-12	4.59E-12	1.10E-13	1.50E-01	6.79E-13	6.88E-13	4.22E-14	1.48E-12	7.21E-13	2.16E-12
265	Mercury		2.93E-11	2.97E-11	7.12E-13	2.20E-02	6.44E-13	6.53E-13	2.73E-13	9.55E-12	9.16E-13	1.02E-11
266												
267					4.40E-01	r corn						
268					5.78E-07	k corn, 1/s						
269					1.12E+07	t corn, s						
270					1.80E+00	y corn, Kg/M2						
271					4.22E+05	SDF corn, sec/mg/Kg						
272					3.15E+07	sec/yr						
273					1.00E+03	mg/g						
274												
275												
276												
277												
278												
279												
280												

$SDF = r \cdot (1 - e^{-kt})$
 Y^*k
 $Cs = SDF \cdot \text{Deposition} \cdot \text{mgg/secyr}$
 $Cu = RUF \cdot C_{soil}$
 $C \text{ corn} = Cs + Cu$

AO

B	C	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
BASE CASE		CONTAMINANT	CONCENTRATION	IN GRASS	mg/Kg						
202	203	204	205	206	207	208	209	210	211	212	213
18-Jun-91	14:39:23	C soil	C soil	D	PUF	Cu	Cu	Cs	Cs	C grass	C grass
		AVERAGE	MAXIMUM	DEPOSITION	PLANT UPTAKE	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
		CONC IN	CALCULATED	RATE	FACTOR	CONC.DUE	CONC.DUE	CONC. ON	CONC. ON	CALCULATED	CALCULATED
		SOIL	CONC IN	g/m2/yr		TO UPTAKE	TO UPTAKE	PLANT	PLANT	CONC IN	CONC IN
		.1M	SOIL			mg/Kg	mg/Kg	SURFACE	SURFACE	GRASS	GRASS
		mg/Kg	.1M			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
202	203	204	205	206	207	208	209	210	211	212	213
ORGANICS											
214	Acetonitrile	7.92E-09	8.03E-09	2.91E-11	6.13E+01	4.85E-07	4.92E-07	1.05E-10	3.67E-09	4.85E-07	4.96E-07
215	Aldrin	1.23E-14	1.25E-14	4.51E-17	1.99E-03	2.44E-17	2.48E-17	1.63E-16	5.69E-15	1.87E-16	5.72E-15
216	Aniline	4.45E-10	4.52E-10	1.63E-12	1.17E+01	5.21E-09	5.28E-09	5.89E-12	2.06E-10	5.21E-09	5.49E-09
217	Atrazine	2.75E-12	2.79E-12	1.01E-14	1.09E+00	2.98E-12	3.03E-12	3.64E-14	1.27E-12	3.02E-12	4.30E-12
218	Benzaldehyde	2.03E-10	2.06E-10	7.45E-13	5.39E+00	1.09E-09	1.11E-09	2.68E-12	9.39E-11	1.10E-09	1.20E-09
219	Benzofuran	9.86E-11	1.00E-09	3.62E-12	1.10E+00	1.08E-09	1.10E-09	1.31E-11	4.57E-10	1.10E-09	1.56E-09
220	Benzoic Acid	9.93E-11	1.01E-10	3.65E-13	3.20E+00	3.18E-10	3.23E-10	1.31E-12	4.60E-11	1.31E-10	3.69E-10
221	Benzonitrile	2.17E-09	2.20E-09	7.96E-12	4.84E+00	1.05E-08	1.06E-08	2.87E-11	1.00E-09	1.05E-08	1.17E-08
222	Benzothiazole	9.24E-13	9.37E-13	3.39E-15	2.66E+00	2.45E-12	2.49E-12	1.22E-14	4.28E-13	2.47E-12	2.92E-12
223	Bis(2-ethylhexyl)phthalate	5.45E-13	5.53E-13	2.00E-15	3.36E-04	1.83E-16	1.86E-16	7.21E-15	2.53E-13	7.40E-15	2.53E-13
224	Carbazole	4.45E-12	4.52E-12	1.63E-14	4.81E-01	2.14E-12	2.17E-12	5.89E-14	2.06E-12	2.20E-12	4.23E-13
225	4-Chloroaniline	2.55E-13	2.59E-13	9.36E-16	3.38E+00	8.61E-13	8.73E-13	3.37E-15	1.18E-13	8.64E-13	9.91E-13
226	4-Chlorobiphenyl	6.28E-13	6.37E-13	2.31E-15	5.60E-02	3.51E-14	3.56E-14	8.31E-15	2.91E-13	4.34E-14	3.26E-13
227	4,4'-Chlorobiphenyl	3.16E-14	3.21E-14	1.16E-16	2.26E-02	7.13E-16	7.24E-16	4.18E-16	1.46E-14	1.35E-15	1.54E-14
228	Chloroethane	2.25E-11	2.28E-11	8.26E-14	5.32E+00	1.20E-10	1.21E-10	2.98E-13	1.04E-11	1.20E-10	1.32E-10
229	Dibenzofuran	1.98E-11	2.01E-11	7.27E-14	1.59E-01	3.14E-12	3.19E-12	2.62E-13	9.17E-12	3.40E-12	1.24E-11
230	1,2-Dichloroethane	2.28E-12	2.31E-12	8.36E-15	5.39E+00	1.23E-11	1.25E-11	3.01E-14	1.06E-12	1.23E-11	1.35E-11
231	Dieldrin	2.26E-14	2.29E-14	8.29E-17	9.86E+03	2.23E-16	2.26E-16	2.99E-16	1.05E-14	5.21E-16	1.07E-14
232	Hexachlorobenzene	5.97E-11	6.05E-11	2.19E-13	2.61E-02	1.56E-12	1.58E-12	7.89E-13	2.76E-11	2.35E-12	2.92E-11
233	Hydrazine	7.71E-08	7.82E-08	2.83E-10	2.38E+03	1.83E-04	1.86E-04	1.02E-09	3.57E-08	1.83E-04	1.86E-04
234	Lindane	1.05E-14	1.06E-14	3.85E-17	4.74E-01	4.97E-15	5.04E-15	1.39E-16	4.86E-15	5.11E-15	9.90E-1

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-JUN-91

202	B	C	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
203	BASE CASE		TABLE 20									
262	INORGANICS											
263	Arsenic		2.61E-09	2.65E-09	9.59E-12	1.30E-02	3.39E-11	3.44E-11	3.46E-11	1.21E-09	6.85E-11	1.24E-09
264	Cadmium		1.51E-11	1.54E-11	5.56E-14	5.50E-01	8.33E-12	8.45E-12	2.00E-13	7.01E-12	8.53E-12	1.55E-11
265	Mercury		9.79E-11	9.93E-11	3.60E-13	5.90E-01	5.78E-11	5.86E-11	1.30E-12	4.54E-11	5.91E-11	1.04E-10
266												
267						6.71E-02	r grass					
268						5.78E-07	k grass, 1/s					
269						3.02E+06	t grass, s					
270						2.41E-02	Y grass, Kg/M2	Y				
271						3.97E+06	SDF grass, sec*mg/kg					
272						3.15E+07	sec/yr	SDF				
273						1.00E+03	mg/g	secyr				
274								mgg				
275												
276												
277												
278												
279												
280												
281												

$$SDF = \frac{-kt}{Y * k} * (1 - e^{-Y * k})$$

Cs = SDF*Deposition*mgg/secyr
 Cu = RUF*Cssoil
 C grass = Cs+Cu

202	B	BASE CASE	C	AQ	AR	AS	AT	AU	AV	AW
203				TABLE 21						
204				MILK INGESTION - AVERAGE						
205										
206				C diet	DUFm	TC	C milk	C milkfat	EDI	EDI
207				AVERAGE	DIET	TRANSFER	AVERAGE	AVERAGE	ADULT	CHILD
208				CONC IN	UP TAKE	COEFFICIENT	CONC IN	CONC IN	ESTIMATED	ESTIMATED
209				DIET	MILK	MILK	MILK	MILK FAT	DAILY	DAILY
210				(milk)	Unitless	Day/Kg	mg/Kg	mg/Kg	INTAKE	INTAKE
211				mg/Kg					mg/Kg/day	mg/Kg/day
212										
213										
214										
215				1.30E-07		3.72E-09	1.09E-14		2.37E-18	1.37E-17
216				4.79E-17		2.04E-01	2.19E-16		4.78E-20	2.76E-19
217				1.40E-09		6.46E-08	2.03E-15		4.43E-19	2.56E-18
218				8.12E-13		3.89E-06	7.09E-17		1.54E-20	8.92E-20
219				2.95E-10		2.45E-07	1.62E-15		3.54E-19	2.04E-18
220				2.95E-10		3.80E-06	2.52E-14		5.49E-18	3.17E-17
221				8.58E-11		6.03E-07	1.16E-15		2.53E-19	1.46E-18
222				2.83E-09		2.95E-07	1.87E-14		4.08E-18	2.36E-17
223				6.63E-13		8.32E-07	1.24E-17		2.70E-21	1.56E-20
224				1.88E-15		4.37E+00	1.84E-13		4.02E-17	2.32E-16
225				5.90E-13		1.58E-05	2.10E-16		4.58E-20	2.64E-19
226				2.32E-13		5.50E-07	2.87E-18		6.24E-22	3.61E-21
227				1.16E-14		6.46E-04	1.68E-16		3.65E-20	2.11E-19
228				2.98E-16		3.09E-03	2.07E-17		4.50E-21	2.60E-20
229				3.23E-11		2.51E-07	1.82E-16		3.96E-20	2.29E-19
230				9.31E-13		1.07E-04	2.19E-15		4.77E-19	2.76E-18
231				3.11E-12		2.45E-07	1.82E-17		3.97E-21	2.29E-20
232				1.36E-16		1.29E-02	3.92E-17		8.55E-21	4.94E-20
233				6.20E-13		2.40E-03	3.34E-14		7.27E-18	4.20E-17
234				4.93E-05		6.76E-12	7.48E-15		1.63E-18	9.42E-18
235				1.37E-15		1.62E-05	5.00E-19		1.09E-22	6.29E-22
236				6.93E-15		6.31E-06	9.82E-19		2.14E-22	1.24E-21
237				2.83E-11		1.48E-08	9.40E-18		2.05E-21	1.18E-20
238				2.73E-12		7.08E-07	4.35E-17		9.47E-21	5.47E-20
239				1.55E-05		6.76E-12	2.36E-15		5.14E-19	2.97E-18
240				5.03E-14		1.82E-05	2.05E-17		4.47E-21	2.58E-20
241				2.66E-10		1.82E-05	1.09E-13		2.37E-17	1.37E-16
242				6.41E-10		1.70E-09	2.45E-17		5.33E-21	3.08E-20
243										
244				4.83E-12		9.55E-05	1.04E-14		2.26E-18	1.30E-17
245				5.83E-12		6.76E-05	8.84E-15		1.93E-18	1.11E-17
246				1.06E-12		2.14E-02	5.07E-13		1.10E-16	6.38E-16
247				1.57E-13		5.01E-03	1.77E-14		3.85E-18	2.23E-17
248				1.02E-12		2.57E-02	5.87E-13		1.28E-16	7.38E-16
249				2.61E-12		1.35E-03	7.90E-14		1.72E-17	9.94E-17
250				6.63E-13		1.95E-04	2.90E-15		6.32E-19	3.65E-18
251				2.06E-15		3.02E-04	1.40E-17		3.05E-21	1.76E-20
252				5.43E-12		1.23E-03	1.50E-13		3.27E-17	1.89E-16
253				3.33E-15		5.25E-05	3.92E-18		8.54E-22	4.93E-21
254				3.69E-13		9.77E-04	8.10E-15		1.77E-18	1.02E-17
255				5.80E-13		2.34E-07	3.05E-18		6.65E-22	3.84E-21
256				1.56E-11		8.71E-07	3.05E-16		6.63E-20	3.83E-19
257				4.05E-13		1.91E-04	1.73E-15		3.77E-19	2.18E-18
258				3.31E-13		7.76E-05	5.78E-16		1.26E-19	7.27E-19
259				2.54E-05		3.09E-11	1.76E-14		3.84E-18	2.22E-17
260				3.13E-13		2.04E-07	1.44E-18		3.13E-22	1.81E-21
261										

ORGANICS

Acetonitrile
Aldrin
Aniline
Atrazine
Benzaldehyde
Benzofuran
Benzoic Acid
Benzonitrile
Benzothiazole
Bis(2-ethylhexyl)phthalate
Carbazole
4-Chloroaniline
4-Chlorobiphenyl
4,4'-Chlorobiphenyl
Chloroethane
Dibenzofuran
1,2-Dichloroethane
Dieldrin
Hexachlorobenzene
Hydrazine
Lindane
Malathion
Methyl ethyl ketone
4-Methylphenol
Monomethyl hydrazine
Naphthalene
Naphthalene carbonitrile
n-Nitrosodimethylamine
PAHs

Acenaphthalene
Acenaphthene
Benzo(a)pyrene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Phenanthrene
Pyrene
Parathion
Pentachlorobenzene
Phenol
Quinoline
Tetrachlorobenzene
Trichlorobenzene
Unsym. dimethyl hydrazine
Vapona

202	B	C	AQ	AR	AS	AT	AU	AV	AW
203	BASE CASE	TABLE 21							
262	INORGANICS								
263	Arsenic	6.89E-11			6.00E-03	9.28E-12		2.02E-15	1.17E-14
264	Cadmium	8.54E-13			1.00E-03	1.92E-14		4.18E-18	2.41E-17
265	Mercury	4.84E-12			4.50E-04	4.89E-14		1.06E-17	6.15E-17
266									
267		ADULT		CHILD					
268		0.55		DAILY INTAKE OF GRAIN % of TOTAL					DI grain
269		0.175		DAILY INTAKE OF HAY % of TOTAL					DI hay
270		0		DAILY INTAKE OF GRASS % of TOTAL					DI grass
271		0.175		DAILY INTAKE OF CORN SILAGE % of TOTAL					DI corn
272		0.02		SOIL INGESTION % of GRASS INTAKE					SI
273		22.45		TOTAL FEED INTAKE Kg/day					TI
274		0.305		0.39 CONSUMPTION RATE OF MILK PER DAY Kg/day					CRM
275		0.011		0.016 CONSUMPTION RATE OF MILK FAT PER DAY Kg/day					CRMf
276		0.05		0.05 FRACTION OF MILK CONSUMED FROM RURAL SOURCE.					HG
277		70		15.5 BODY WEIGHT Kg					WT
278									
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feed} * DI * X) + (C \text{ soil} * SI * DI \text{ GRASS})) / (1 + (SI * DI \text{ GRASS}))$$

202	B	C	AZ	BA	BB	BC	BD	BE
203	BASE CASE							
262	INORGANICS	TABLE 22						
263	Arsenic	3.68E-10		6.00E-03	4.96E-11		1.08E-14	6.24E-14
264	Cadmium	2.59E-12		1.00E-03	5.82E-14		1.27E-17	7.33E-17
265	Mercury	1.61E-11		4.50E-04	1.63E-13		3.54E-17	2.04E-16
266								
267	ADULT		CHILD					
268	0.55			DAILY INTAKE OF GRAIN % of TOTAL				DI grain
269	0.175			DAILY INTAKE OF HAY % of TOTAL				DI hay
270	0			DAILY INTAKE OF GRASS % of TOTAL				DI grass
271	0.175			DAILY INTAKE OF CORN SILAGE % of TOTAL				DI corn
272	0.02			SOIL INGESTION % of GRASS INTAKE				SI
273	22.45			TOTAL FEED INTAKE Kg/day				TI
274	0.305			0.39 CONSUMPTION RATE OF MILK PER DAY Kg/day				CRm
275	0.011			0.016 CONSUMPTION RATE OF MILK FAT PER DAY Kg/day				CRmf
276	0.05			0.05 FRACTION OF MILK CONSUMED FROM RURAL SOURCE.				HG
277	70			15.5 ADULT WEIGHT Kg				WT
278								

C diet = (SUM(C feedx*DIx)+(C soil*SI*DI GRASS))/(1+(SI*DI GRASS))
C milkfat = DUFm*C diet (dioxins)

	B	C
202		
203	BASE CASE	

TABLE 23
BEEF INGESTION - AVERAGE

[illegible]

202	B	C	BG	BH	BI	BJ	BK	BL	BM
203	BASE CASE								
262	INORGANICS		TABLE 23						
263	Arsenic		2.13E-11		2.00E-03	5.54E-13		2.65E-17	6.61E-17
264	Cadmium		5.35E-13		5.50E-04	3.81E-15		1.83E-19	4.55E-19
265	Mercury		5.14E-12		2.50E-01	1.67E-11		7.98E-16	1.99E-15
266									
267		ADULT		CHILD					
268		0.8		DAILY INTAKE OF GRAIN % of TOTAL					DI grain
269		0.05		DAILY INTAKE OF HAY % of TOTAL					DI hay
270		0		DAILY INTAKE OF GRASS % of TOTAL					DI grass
271		0.05		DAILY INTAKE OF CORN SILAGE % of TOTAL					DI corn
272		0.02		SOIL INGESTION % of GRASS INTAKE					SI
273		12.97		TOTAL FEED INTAKE Kg/day					TI
274		0.067		0.037 CONSUMPTION RATE OF BEEF PER DAY Kg/day					CRb
275		0.015		0.009 CONSUMPTION RATE OF BEEF FAT PER DAY Kg/day					CRbf
276		0.05		0.05 FRACTION OF BEEF CONSUMED FROM RURAL SOURCE.					HG
277		70		15.5 BODY WEIGHT Kg					WT
278									
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feedx*DIx}) + (C \text{ soil*SI*DI GRASS})) / (1 + (SI*DI GRASS))$$

BO BP
TABLE 24
BEEF INGESTION - MAXIMUM

B	C	BO	BP	BQ	BR	BS	BT	BU
BASE CASE		TABLE 24 BEEF INGESTION - MAXIMUM						
		C diet MAXIMUM CALCULATED CONC IN DIET (beef) mg/Kg	DUFb DIET UPTAKE BEEF Unitless	TC TRANSFER COEFFICIENT BEEF Day/Kg	C beef MAXIMUM CALCULATED CONC IN BEEF mg/Kg	C beeffat MAXIMUM CALCULATED CONC IN BEEFFAT mg/Kg	EDI ADULT MAXIMUM ESTIMATED DAILY INTAKE mg/Kg/day	EDI CHILD MAXIMUM ESTIMATED DAILY INTAKE mg/Kg/day
202								
203								
204								
205								
206								
207								
208								
209								
210								
211								
212								
213								
214		ORGANICS						
215		Acetonitrile		1.15E-08	1.97E-14		9.45E-19	2.36E-18
216		Aldrin		6.31E-01	3.43E-15		1.64E-19	4.10E-19
217		Aniline		2.00E-07	3.71E-15		1.78E-19	4.43E-19
218		Atrazine		1.20E-05	1.41E-16		6.77E-21	1.69E-20
219		Benzaldehyde		7.59E-07	3.00E-15		1.44E-19	3.58E-19
220		Benzofuran		1.17E-05	5.01E-14		2.40E-18	5.98E-18
221		Benzoic Acid		1.86E-06	2.18E-15		1.04E-19	2.60E-19
222		Benzonitrile		9.12E-07	3.47E-14		1.66E-18	4.15E-18
223		Benzothiazole		2.57E-06	2.33E-17		1.12E-21	2.79E-21
224		Bis(2-ethylhexyl)phthalate		1.35E+01	3.21E-12		1.54E-16	3.83E-16
225		Carbazole		4.90E-05	4.66E-16		2.23E-20	5.56E-20
226		4-Chloroaniline		1.70E-06	5.36E-18		2.57E-22	6.40E-22
227		4-Chlorobiphenyl		2.00E-03	7.94E-16		3.80E-20	9.48E-20
228		4,4'-Chlorobiphenyl		9.55E-03	1.56E-16		7.45E-21	1.86E-20
229		Chloroethane		7.76E-07	3.36E-16		1.61E-20	4.01E-20
230		Dibenzofuran		3.31E-04	6.53E-15		3.13E-19	7.80E-19
231		1,2-Dichloroethane		7.59E-07	3.37E-17		1.61E-21	4.02E-21
232		Dieldrin		3.98E-02	4.23E-16		2.02E-20	5.05E-20
233		Hexachlorobenzene		7.41E-03	2.34E-13		1.12E-17	2.79E-17
234		Hydrazine		2.09E-11	1.36E-14		6.49E-19	1.62E-18
235		Lindane		5.01E-05	1.11E-18		5.32E-23	1.33E-22
236		Malathion		1.95E-05	2.02E-18		9.64E-23	2.41E-22
237		Methyl ethyl ketone		4.57E-08	1.71E-17		8.18E-22	2.04E-21
238		4-Methylphenol		2.88E-11	8.17E-17		3.91E-21	9.75E-21
239		Monomethyl hydrazine		1.58E-05	4.27E-15		2.05E-19	5.10E-19
240		Naphthalene		5.62E-05	4.62E-17		2.21E-21	5.51E-21
241		Naphthalene carbonitrile		5.62E-05	2.44E-13		1.17E-17	2.92E-17
242		n-Nitrosodimethylamine		5.25E-09	4.43E-17		2.12E-21	5.29E-21
243		PAHs						
244		Acenaphthalene		2.95E-04	3.01E-14		1.44E-18	3.60E-18
245		Acenaphthene		2.09E-04	2.41E-14		1.15E-18	2.87E-18
246		Benzo(a)pyrene		6.61E-02	6.04E-12		2.89E-16	7.21E-16
247		Chrysene		1.55E-02	1.52E-13		7.28E-18	1.81E-17
248		Dibenzo(a,h)anthracene		7.94E-02	7.22E-12		3.45E-16	8.61E-16
249		Fluoranthene		4.17E-03	4.66E-13		2.23E-17	5.56E-17
250		Fluorene		6.03E-04	9.93E-15		4.75E-19	1.18E-18
251		Phenanthrene		9.33E-04	5.35E-17		2.56E-21	6.38E-21
252		Pyrene		1.79E-11	3.80E-03		4.12E-17	1.03E-16
253		Parathion		1.62E-04	1.02E-17		4.89E-22	1.22E-21
254		Pentachlorobenzene		3.02E-03	4.34E-14		2.08E-18	5.18E-18
255		Phenol		7.24E-07	5.64E-18		2.70E-22	6.73E-22
256		Quinoline		2.69E-06	5.75E-16		2.75E-20	6.86E-20
257		Tetrachlorobenzene		5.89E-04	5.89E-15		2.82E-19	7.03E-19
258		Trichlorobenzene		2.40E-04	1.61E-15		7.72E-20	1.93E-19
259		Unsym. dimethyl hydrazine		9.55E-11	3.19E-14		1.53E-18	3.81E-18
260		Vapona		6.31E-07	2.65E-18		1.27E-22	3.16E-22
261								

202	B	C	BO	BP	BQ	BR	BS	BT	BU
203	BASE CASE								
262	INORGANICS		TABLE 24						
263	Arsenic		1.07E-10		2.00E-03	2.77E-12		1.33E-16	3.31E-16
264	Cadmium		1.04E-12		5.50E-04	7.39E-15		3.54E-19	8.82E-19
265	Mercury		8.41E-12		2.50E-01	2.73E-11		1.31E-15	3.26E-15
266									
267			ADULT	CHILD					
268			0.8			DAILY INTAKE OF GRAIN % of TOTAL			DI grain
269			0.05			DAILY INTAKE OF HAY % of TOTAL			DI hay
270			0			DAILY INTAKE OF GRASS % of TOTAL			DI grass
271			0.05			DAILY INTAKE OF CORN SILAGE % of TOTAL			DI corn
272			0.02			SOIL INGESTION % of GRASS INTAKE			SI
273			12.97			TOTAL FEED INTAKE Kg/day			TI
274			0.067			0.037 CONSUMPTION RATE OF BEEF PER DAY Kg/day			CRb
275			0.015			0.009 CONSUMPTION RATE OF BEEF FAT PER DAY Kg/day			CRbf
276			0.05			0.05 FRACTION OF BEEF CONSUMED FROM RURAL SOURCE.			HG
277			70			15.5 ADULT WEIGHT Kg			WT
278									
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feedx} * DIx) * (C \text{ soil} * SI * DI \text{ GRASS})) / ((1 + (SI * DI \text{ GRASS})))$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

B	C	E	F	G	H	I	J
BASE CASE	TABLE 25 DERMAL EXPOSURE CHILD						
	C soil	C soil	C soil	AF	ED1 AVERAGE ESTIMATED DAILY INTAKE mg/Kg/day	ED1 MAXIMUM ESTIMATED DAILY INTAKE mg/Kg/day	
	AVERAGE CONC IN SOIL .1M mg/kg	MAXIMUM CALCULATED CONC IN SOIL .1M mg/kg	MAXIMUM CALCULATED CONC IN SOIL .1M mg/kg	ABSORPTION FACTOR			
18-Jun-91 14:39:23							
284		7.92E-09	8.03E-09	1.00E-01	3.48E-14	3.53E-14	
285		1.23E-14	1.25E-14	1.00E-01	5.40E-20	5.48E-20	
286		4.45E-10	4.52E-10	1.00E-01	1.96E-15	1.98E-15	
287		2.75E-12	2.79E-12	1.00E-01	1.21E-17	1.23E-17	
288		2.03E-10	2.06E-10	1.00E-01	8.91E-16	9.04E-16	
289		9.86E-10	1.00E-09	1.00E-01	4.33E-15	4.40E-15	
290		9.93E-11	1.01E-10	1.00E-01	4.36E-16	4.43E-16	
291		2.17E-09	2.20E-09	1.00E-01	9.52E-15	9.66E-15	
292		9.24E-13	9.37E-13	1.00E-01	4.06E-18	4.12E-18	
293		5.45E-13	5.53E-13	1.00E-01	2.40E-18	2.43E-18	
294		4.45E-12	4.52E-12	1.00E-01	1.96E-17	1.98E-17	
295		2.55E-13	2.59E-13	1.00E-01	1.12E-18	1.14E-18	
296	ORGANICS	6.28E-13	6.37E-13	1.00E-01	2.76E-18	2.80E-18	
297	Acetonitrile	3.16E-14	3.21E-14	1.00E-01	1.39E-19	1.41E-19	
298	Aldrin	2.25E-11	2.28E-11	1.00E-01	9.89E-17	1.00E-16	
299	Aniline	1.98E-11	2.01E-11	1.00E-01	8.70E-17	8.82E-17	
300	Atrazine	2.28E-12	2.31E-12	1.00E-01	1.00E-17	1.02E-17	
301	Benzaldehyde	2.26E-14	2.29E-14	1.00E-01	9.92E-20	1.01E-19	
302	Benzofuran	5.97E-11	6.05E-11	1.00E-01	2.62E-16	2.66E-16	
303	Benzoic Acid	1.05E-14	1.06E-14	1.00E-01	3.39E-13	3.44E-13	
304	Benzonitrile	3.83E-12	3.88E-12	1.00E-01	1.36E-19	1.38E-19	
305	Benzothiazole	3.47E-12	3.52E-12	1.00E-01	1.68E-17	1.71E-17	
306	Bis(2-ethylhexyl)phthalate	2.43E-08	2.47E-08	1.00E-01	1.53E-17	1.55E-17	
307	Carbazole	4.10E-13	4.16E-13	1.00E-01	1.07E-13	1.08E-13	
308	4-Chloroaniline	2.17E-09	2.20E-09	1.00E-01	1.80E-18	1.83E-18	
309	4-Chlorobiphenyl	2.47E-11	2.51E-11	1.00E-01	9.52E-15	9.66E-15	
310	4,4'-Chlorobiphenyl	2.47E-11	2.51E-11	1.00E-01	1.09E-16	1.10E-16	
311	Chloroethane	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
312	Dibenzofuran	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
313	1,2-Dichloroethane	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
314	Dieldrin	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
315	Hexachlorobenzene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
316	Hydrazine	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
317	Lindane	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
318	Malathion	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
319	Methyl ethyl ketone	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
320	4-Methylphenol	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
321	Monomethyl hydrazine	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
322	Naphthalene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
323	Naphthalene carbonitrile	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
324	n-Nitrosodimethylamine	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
325	PAHS	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
326	Acenaphthalene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
327	Acenaphthene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
328	Benzo(a)pyrene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
329	Chrysene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
330	Dibenzo(a,h)anthracene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
331	Fluoranthene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
332	Fluorene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
333	Phenanthrene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
334	Pyrene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
335	Parathion	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
336	Pentachlorobenzene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
337	Phenol	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
338	Quinoline	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
339	Tetrachlorobenzene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
340	Trichlorobenzene	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
341	Unsym. dimethyl hydrazine	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
342	Vapona	9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	
343		9.86E-11	1.00E-10	1.00E-01	4.33E-16	4.40E-16	

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

284	B	C	E	F	G	H	I	J
285	BASE CASE							
344	INORGANICS		TABLE 25					
345	Arsenic		2.61E-09	2.65E-09	1.00E-02	1.15E-15	1.16E-15	
346	Cadmium		1.51E-11	1.54E-11	1.00E-02	6.65E-18	6.75E-18	
347	Mercury		9.79E-11	9.93E-11	1.00E-02	4.30E-17	4.37E-17	
348								
349			195 Number of exposure events per year (events/yr.)					NE
350			2500 Exposed surface area (cm2/event)					ESA
351			0.51 Skin adherence factor for soil (mg/cm2)					SAF
352			1 Soil matrix factor					SMF
353			15.5 Body weight (Kg)					BW
354			365 Days/yr					DAYR
355			1000000 mg/Kg					mgKg
356								
357								

$$EDI = C_{soil} * AF * SAF * ESA * NE * SMF / BW / mgKg / DAYR$$

B	C	K	L	M	N	O
BASE CASE	TABLE 26	DERMAL EXPOSURE ADULT	AF	EDI	EDI	EDI
	18-Jun-91	C soil	MAXIMUM	ABSORPTION	AVERAGE	MAXIMUM
	14:39:23	AVERAGE	CALCULATED	FACTOR	DAILY	ESTIMATED
		CONC IN	CONC IN		INTAKE	DAILY
		SOIL	SOIL		INTAKE	INTAKE
		.2M	.2M		mg/Kg/day	mg/Kg/day
		mg/Kg	mg/Kg			
284		3.96E-09	4.02E-09	1.00E-01	4.16E-15	4.22E-15
285		6.15E-15	6.24E-15	1.00E-01	6.46E-21	6.55E-21
286		2.23E-10	2.26E-10	1.00E-01	2.34E-16	2.37E-16
287		1.38E-12	1.40E-12	1.00E-01	1.45E-18	1.47E-18
288		1.01E-10	1.03E-10	1.00E-01	1.07E-16	1.08E-16
289		4.93E-10	5.00E-10	1.00E-01	5.18E-16	5.26E-16
290		4.97E-11	5.04E-11	1.00E-01	5.22E-17	5.29E-17
291		1.08E-09	1.10E-09	1.00E-01	1.14E-15	1.16E-15
292		4.62E-13	4.69E-13	1.00E-01	4.85E-19	4.92E-19
293		2.73E-13	2.77E-13	1.00E-01	2.86E-19	2.91E-19
294		2.23E-12	2.26E-12	1.00E-01	2.34E-18	2.37E-18
295		1.27E-13	1.29E-13	1.00E-01	1.34E-19	1.36E-19
296	ORGANICS	3.14E-13	3.18E-13	1.00E-01	3.30E-19	3.35E-19
297	Acetonitrile	1.58E-14	1.60E-14	1.00E-01	1.66E-20	1.68E-20
298	Aldrin	1.13E-11	1.14E-11	1.00E-01	1.18E-17	1.20E-17
299	Aniline	9.90E-12	1.00E-11	1.00E-01	1.04E-17	1.06E-17
300	Atrazine	1.14E-12	1.16E-12	1.00E-01	1.20E-18	1.21E-18
301	Benzaldehyde	1.13E-14	1.14E-14	1.00E-01	1.19E-20	1.20E-20
302	Benzofuran	2.98E-11	3.03E-11	1.00E-01	3.13E-17	3.18E-17
303	Benzoic Acid	3.85E-08	3.91E-08	1.00E-01	4.05E-14	4.11E-14
304	Benzonitrile	5.24E-15	5.32E-15	1.00E-01	5.51E-21	5.59E-21
305	Benzothiazole	1.55E-14	1.57E-14	1.00E-01	1.63E-20	1.65E-20
306	Bis(2-ethylhexyl)phthalate	1.91E-12	1.94E-12	1.00E-01	2.01E-18	2.04E-18
307	Carbazole	1.74E-12	1.76E-12	1.00E-01	1.82E-18	1.85E-18
308	4-Chloroaniline	1.22E-08	1.23E-08	1.00E-01	1.28E-14	1.30E-14
309	4-Chlorobiphenyl	2.05E-13	2.08E-13	1.00E-01	2.15E-19	2.18E-19
310	4,4'-Chlorobiphenyl	1.08E-09	1.10E-09	1.00E-01	1.14E-15	1.16E-15
311	Chloroethane	1.24E-11	1.25E-11	1.00E-01	1.30E-17	1.32E-17
312	Dibenzofuran	4.93E-11	5.00E-11	1.00E-01	5.18E-17	5.26E-17
313	1,2-Dichloroethane	4.93E-11	5.00E-11	1.00E-01	5.18E-17	5.26E-17
314	Dieldrin	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
315	Hexachlorobenzene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
316	Hydrazine	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
317	Lindane	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
318	Malathion	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
319	Methyl ethyl ketone	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
320	4-Methylphenol	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
321	Monomethyl hydrazine	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
322	Naphthalene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
323	Naphthalene carbonitrile	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
324	n-Nitrosodimethylamine	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
325	PAHs	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
326	Acenaphthalene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
327	Acenaphthene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
328	Benzo(a)pyrene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
329	Chrysene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
330	Dibenzo(a,h)anthracene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
331	Fluoranthene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
332	Fluorene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
333	Phenanthrene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
334	Pyrene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
335	Parathion	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
336	Pentachlorobenzene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
337	Phenol	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
338	Quinoline	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
339	Tetrachlorobenzene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
340	Trichlorobenzene	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
341	Unsym. dimethyl hydrazine	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
342	Vapona	9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16
343		9.90E-11	1.00E-10	1.00E-01	1.04E-16	1.06E-16

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

284	B	C	K	L	M	N	O
285	BASE CASE						
344	INORGANICS	TABLE 26					
345	Arsenic	1.31E-09	1.32E-09	1.00E-02	1.37E-16	1.39E-16	
346	Cadmium	7.57E-12	7.68E-12	1.00E-02	7.96E-19	8.07E-19	
347	Mercury	4.90E-11	4.97E-11	1.00E-02	5.15E-18	5.22E-18	
348							
349		117	Number of exposure events per year (events/yr)				NE
350		4500	Exposed surface area (cm2/event)				ESA
351		0.51	Skin adherence factor for soil (mg/cm2)				SAF
352		1	Soil matrix factor				SMF
353		70	Body weight (Kg)				BW
354		365	Days/yr				DAYR
355		1000000	mg/Kg				mgKg
356							
357							

$$EDI = C_{soil} \cdot AF \cdot SAF \cdot ESA \cdot NE \cdot SMF / BW / mgKg / DAYR$$

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

B	C	D	E	F	G
BASE CASE	TABLE 27 FISH INGESTION				
	18-Jun-91 14:39:23	C water SURFACE WATER CONCENTRAT. mg/L	BCF BIO. CONC. FACTOR	EDI ADULT ESTIMATED DAILY INTAKE mg/kg/day	EDI CHILD ESTIMATED DAILY INTAKE mg/kg/day
359					
360					
361					
362					
363					
364					
365					
366					
367					
368					
369					
370	ORGANICS				
371	Acetonitrile	1.87E-14	0.06	7.76E-21	1.75E-20
372	Aldrin	1.45E-23	28	2.81E-27	6.34E-27
373	Aniline	5.60E-15	6.03	2.33E-19	5.27E-19
374	Atrazine	3.15E-20	0	0.00E+00	0.00E+00
375	Benzaldehyde	4.54E-16	8	2.51E-20	5.67E-20
376	Benzo(a)pyrene	1.27E-15	63	5.53E-19	1.25E-18
377	Benzoic Acid	2.05E-16	15.5	2.20E-20	4.96E-20
378	Benzonitrile	4.80E-15	9	2.99E-19	6.74E-19
379	Benzo(b)fluoranthene	1.83E-20	19.843	2.51E-24	5.67E-24
380	Bis(2-ethylhexyl)phthalate	5.53E-22	850	3.25E-24	7.34E-24
381	Carbazole	2.57E-18	186	3.31E-21	7.46E-21
382	4-Chloroaniline	9.43E-18	14.5	9.45E-22	2.13E-21
383	4-Chlorobiphenyl	8.32E-20	590	3.39E-22	7.66E-22
384	4,4'-Dichlorobiphenyl	3.84E-21	215	5.71E-24	1.29E-23
385	Chloroethane	5.03E-19	5.5	1.91E-23	4.32E-23
386	Dibenzofuran	3.97E-18	796.5	2.19E-20	4.94E-20
387	1,2-Dichloroethane	4.14E-18	2	5.73E-23	1.29E-22
388	Dieldrin	2.69E-23	5800	1.08E-24	2.44E-24
389	Hexachlorobenzene	7.16E-18	8690	4.30E-19	9.71E-19
390	Hydrazine	1.82E-15	2.8	3.52E-20	7.96E-20
391	Lindane	5.26E-23	130	4.73E-26	1.07E-25
392	Malathion	3.10E-22	0	0.00E+00	0.00E+00
393	Methyl ethyl ketone	9.04E-20	0	0.00E+00	0.00E+00
394	4-Methylphenol	2.18E-19	18	2.71E-23	6.13E-23
395	Monomethyl hydrazine	5.76E-16	2.8	1.12E-20	2.52E-20
396	Naphthalene	4.99E-17	430	1.48E-19	3.35E-19
397	Naphthalene carbonitrile	1.15E-15	430	3.42E-18	7.72E-18
398	n-Nitrosodimethylamine	5.08E-19	0	0.00E+00	0.00E+00
399	PAHS				
400	Acenaphthalene	2.08E-17	730	1.05E-19	2.37E-19
401	Acenaphthene	2.43E-17	242	4.07E-20	9.18E-20
402	Benzo(a)pyrene	2.18E-17	930	1.40E-19	3.17E-19
403	Chrysene	2.23E-18	23000	3.55E-19	8.01E-19
404	Dibenzo(a,h)anthracene	2.21E-17	520000	7.95E-17	1.79E-16
405	Fluorene	3.25E-18	1300	2.92E-20	6.60E-20
406	Phenanthrene	5.53E-18	2630	1.01E-19	2.27E-19
407	Pyrene	4.55E-17	5100	1.60E-18	3.62E-18
408	Parathion	1.37E-22	335	3.17E-25	7.17E-25
409	Quinoline	4.37E-17	21	6.35E-21	1.43E-20
410	Trichlorobenzene	1.40E-18	991	9.59E-21	2.17E-20
411	Unsym. dimethyl hydrazine	2.27E-15	2.8	4.39E-20	9.92E-20
412	Vapona	4.37E-21	7.0	2.12E-25	4.78E-25
413					
414	INORGANICS				
415	Arsenic	1.80E-13	350	4.36E-15	9.84E-15
416	Copper	6.47E-15	1183	5.29E-16	1.20E-15
417	Zinc	5.07E-14	578	2.03E-15	4.58E-15
418					

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

359 B	C	D	E	F	G
360	BASE CASE	TABLE 27			
419					
420					
421					
422		CHILD	ADULT		
423		2.42	4.84	FISH INGESTION RATE g/day	
424		15.5	70	ADULT BODY WEIGHT KG	
425		1000	1000	g/KG	
		0.1	0.1	Fraction lipid in fillet	

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	D	E	F	G
98			TABLE 28			
99			CARCINOGENIC SLOPE FACTORS ((mg/kg-day)-1)			
100			Inhalation	Oral	Dermal	
101			Slope	Slope	Slope	
102			Factor	Factor	Factor	
103	RES-B					
104	BASE CASE					
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		2.40E-01	5.40E-01	NC	
110	Aldrin		1.70E+01	1.70E+01	3.40E+01	
111	Aniline		5.70E-03	5.70E-03	1.14E-02	
112	Benzene		2.90E-02	2.90E-02	NC	
113	Bis(2-ethylhexyl)phthalate		1.40E-02	1.40E-02	2.80E-02	
114	Carbazole		2.00E-02	2.00E-02	4.00E-02	
115	Carbon Tetrachloride		1.30E-01	1.30E-01	NC	
116	Chloroform		8.10E-02	6.10E-03	NC	
117	1,4-Dichlorobenzene		2.40E-02	2.40E-02	NC	
118	1,1-Dichloroethane					
119	1,2-Dichloroethane		9.10E-02	9.10E-02	1.82E-01	
120	1,1-Dichloroethene		1.20E+00	6.00E-01	NC	
121	1,2-Dichloropropane		6.80E-02	6.80E-02	NC	
122	Dieldrin		1.60E+01	1.60E+01	3.20E+01	
123	Hexachlorobenzene		1.60E+00	1.60E+00	3.20E+00	
124	Hydrazine		1.71E+01	3.00E+00	6.00E+00	
125	Lindane		1.30E+00	1.30E+00	2.60E+00	
126	Methyl chloride		6.30E-03	1.30E-02	NC	
127	Methylene chloride		1.40E-02	7.50E-03	NC	
128	4-Methylphenol					
129	Monomethyl hydrazine		1.10E+00	1.10E+00	2.20E+00	
130	n-Nitrosodimethylamine		5.10E+01	5.10E+01	1.02E+02	
131	PAHS					
132	Benzo(a)pyrene		6.10E+00	1.15E+01	2.30E+01	
133	Chrysene		6.10E+00	1.15E+01	2.30E+01	
134	Dibenzo(a,h)anthracene		6.10E+00	1.15E+01	2.30E+01	
135	Parathion					
136	Quinoline		1.20E+01	1.20E+01	2.40E+01	
137	Tetrachloroethene		3.30E-03	5.10E-02	NC	
138	Trichloroethene		1.10E-02	1.10E-02	NC	
139	Vapona		2.90E-01	2.90E-01	5.80E-01	
140	Vinyl chloride		2.95E-01	2.30E+00	NC	
141						
142	INORGANICS					
143	Arsenic		1.50E+01	1.75E+00	3.50E+01	
144	Cadmium		6.10E+00	NC	NC	
145	Chromium (VI)		4.10E+01	NC	NC	
146						
147	Total					
148						
149						
150						
151						
152						
153						

64
5
1
1
1

AED Adult Exposure Duration
CED Child Exposure Duration
CID Child Inhalation Duration
IED Infant Exposure Duration
IID Infant Inhalation Duration

A	B	C	I	J	K	L	M	N	O
98			TABLE 29						
99			ADULT CARCINOGENIC RISK						
100									
101									
102									
103	RES-B		VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
104	BASE CASE		INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	ADULT
105			CARC.	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.
106			RISK	RISK	RISK	RISK	RISK	RISK	RISK
107									
108	ORGANICS								
109	Acrylonitrile		NA	NA	NA	NA	NA	NA	NA
110	Aldrin		1.02E-16	7.43E-19	1.12E-19	2.73E-19	4.36E-26	2.01E-19	1.04E-16
111	Aniline		6.03E-16	2.31E-21	9.04E-22	3.31E-18	1.22E-21	2.44E-18	6.09E-16
112	Benzene		NA	NA	NA	NA	NA	NA	NA
113	Bis(2-ethylhexyl)phthalate		2.84E-18	5.14E-19	6.14E-20	9.97E-21	4.16E-26	7.33E-21	3.43E-18
114	Carbazole		3.33E-18	8.37E-22	3.22E-22	1.16E-19	6.04E-23	8.55E-20	3.53E-18
115	Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA
116	Chloroform		NA	NA	NA	NA	NA	NA	NA
117	1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		7.59E-17	3.31E-22	1.29E-22	2.71E-19	4.76E-24	1.99E-19	7.64E-17
120	1,1-Dichloroethene		NA	NA	NA	NA	NA	NA	NA
121	1,2-Dichloropropane		1.19E-15	1.25E-19	2.95E-20	4.72E-19	1.58E-23	3.47E-19	1.19E-15
122	Dieldrin		2.99E-15	1.06E-17	3.21E-18	1.25E-16	6.29E-19	9.17E-17	3.23E-15
123	Hexachlorobenzene		1.52E-08	4.47E-18	1.75E-18	3.02E-13	9.66E-20	2.22E-13	1.52E-08
124	Hydrazine		5.92E-19	1.29E-22	4.98E-23	1.78E-20	5.62E-26	1.31E-20	6.23E-19
125	Lindane		NA	NA	NA	NA	NA	NA	NA
126	Methyl chloride		NA	NA	NA	NA	NA	NA	NA
127	Methylene chloride		NA	NA	NA	NA	NA	NA	NA
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		1.20E-09	5.17E-19	2.03E-19	3.49E-14	1.12E-20	2.57E-14	1.20E-09
130	n-Nitrosodimethylamine		3.47E-11	2.48E-19	9.74E-20	1.65E-15	0.00E+00	1.21E-15	3.47E-11
131	PAHs								
132	Benzo(a)pyrene		4.10E-15	1.16E-15	2.51E-16	2.97E-15	1.47E-18	2.19E-15	1.07E-14
133	Chrysene		3.19E-15	4.05E-17	1.11E-17	2.97E-16	3.73E-18	2.19E-16	3.76E-15
134	Dibenzo(a,h)anthracene		7.23E-15	1.34E-15	2.81E-16	2.97E-15	8.35E-16	2.19E-15	1.48E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE
136	Quinoline		3.20E-14	7.28E-19	2.85E-19	3.49E-16	6.96E-20	2.57E-16	3.26E-14
137	Tetrachloroethene		NA	NA	NA	NA	NA	NA	NA
138	Trichloroethene		NA	NA	NA	NA	NA	NA	NA
139	Vapona		7.17E-18	8.29E-23	3.25E-23	7.34E-20	5.61E-26	5.40E-20	7.30E-18
140	Vinyl chloride		NA	NA	NA	NA	NA	NA	NA
141									
142	INORGANICS								
143	Arsenic		1.75E-15	3.24E-15	4.24E-17	5.97E-15	6.97E-15	4.39E-15	2.24E-14
144	Cadmium		NA	NA	NA	NA	NA	NA	NA
145	Chromium (VI)		NA	NA	NA	NA	NA	NA	NA
146									
147	Total		1.64E-08	5.80E-15	5.91E-16	3.51E-13	7.81E-15	2.58E-13	1.64E-08

A	B	C	Q	R	S	T	U	V	W	X
98			TABLE 30							
99			CHILD CARCINOGENIC RISK							
100										
101										
102	RES-B		INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
103			CARC.	INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	CHILD
104	BASE CASE		RISK	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.
105				RISK	RISK	RISK	RISK	RISK	RISK	RISK
106										
107										
108	ORGANICS									
109	Acrylonitrile		7.47E-15	NA	NA	NA	NA	NA	NA	7.47E-15
110	Aldrin		1.93E-18	1.20E-17	3.35E-19	2.18E-20	1.93E-19	7.70E-27	1.31E-19	1.46E-17
111	Aniline		2.34E-17	9.47E-17	1.04E-21	1.76E-22	2.34E-18	2.15E-22	1.59E-18	1.22E-16
112	Benzene		6.83E-19	NA	NA	NA	NA	NA	NA	6.83E-19
113	Bis(2-ethylhexyl)phthalate		7.05E-20	3.32E-19	2.32E-19	1.20E-20	7.03E-21	7.34E-27	4.79E-21	6.58E-19
114	Carbazole		8.22E-17	4.24E-19	3.77E-22	6.28E-23	8.21E-20	1.07E-23	5.59E-20	1.39E-18
115	Carbon Tetrachloride		1.55E-17	NA	NA	NA	NA	NA	NA	1.55E-17
116	Chloroform		8.21E-17	NA	NA	NA	NA	NA	NA	8.21E-17
117	1,4-Dichlorobenzene		3.57E-20	NA	NA	NA	NA	NA	NA	3.57E-20
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		1.91E-18	9.79E-18	1.49E-22	2.52E-23	1.91E-19	8.40E-25	1.30E-19	1.20E-17
120	1,1-Dichloroethene		4.33E-17	NA	NA	NA	NA	NA	NA	4.33E-17
121	1,2-Dichloropropane		9.07E-19	NA	NA	NA	NA	NA	NA	9.07E-19
122	Dieldrin		3.34E-18	1.39E-16	5.64E-20	5.74E-21	3.33E-19	2.78E-24	2.27E-19	1.43E-16
123	Hexachlorobenzene		8.82E-16	3.53E-16	4.80E-18	6.25E-19	8.80E-17	1.11E-19	5.99E-17	1.39E-15
124	Hydrazine		1.22E-11	2.22E-09	2.02E-18	3.42E-19	2.13E-13	1.70E-20	1.45E-13	2.23E-09
125	Lindane		1.26E-19	7.46E-20	5.84E-23	9.71E-24	1.26E-20	9.91E-27	8.56E-21	2.22E-19
126	Methyl chloride		1.76E-19	NA	NA	NA	NA	NA	NA	1.76E-19
127	Methylene chloride		2.36E-17	NA	NA	NA	NA	NA	NA	2.36E-17
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		2.47E-13	1.93E-10	2.33E-19	3.95E-20	2.46E-14	1.98E-21	1.68E-14	1.93E-10
130	n-Nitrosodimethylamine		1.16E-14	4.16E-12	1.12E-19	1.90E-20	1.16E-15	0.00E+00	7.92E-16	4.17E-12
131	PAHs									
132	Benzo(a)pyrene		1.12E-14	5.05E-16	5.24E-16	4.88E-17	2.10E-15	2.60E-19	1.43E-15	1.58E-14
133	Chrysene		1.12E-15	3.77E-16	1.83E-17	2.16E-18	2.10E-16	6.58E-19	1.43E-16	1.87E-15
134	Dibenzo(a,h)anthracene		1.12E-14	8.69E-16	6.06E-16	5.47E-17	2.10E-15	1.47E-16	1.43E-15	1.64E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		2.47E-15	4.31E-15	3.28E-19	5.54E-20	2.47E-16	1.23E-20	1.68E-16	7.19E-15
137	Tetrachloroethene		1.27E-20	NA	NA	NA	NA	NA	NA	1.27E-20
138	Trichloroethene		4.52E-19	NA	NA	NA	NA	NA	NA	4.52E-19
139	Vapona		5.19E-19	1.11E-18	3.74E-23	6.33E-24	5.18E-20	9.89E-27	3.53E-20	1.72E-18
140	Vinyl chloride		6.94E-18	NA	NA	NA	NA	NA	NA	6.94E-18
141										
142	INORGANICS									
143	Arsenic		3.62E-13	2.21E-16	1.46E-15	8.26E-18	4.21E-15	1.23E-15	2.87E-15	3.72E-13
144	Cadmium		8.53E-16	NA	NA	NA	NA	NA	NA	8.53E-16
145	Chromium (VI)		8.94E-16	NA	NA	NA	NA	NA	NA	8.94E-16
146										
147	Total		1.28E-11	2.42E-09	2.62E-15	1.15E-16	2.48E-13	1.38E-15	1.69E-13	2.43E-09

A	B	C	Z	AA	AB
98			TABLE 31		
99			INFANT CARCINOGENIC RISK		
100					
101					
102					
103	RES-B				
104	BASE CASE				
105					
106					
107					
108	ORGANICS				
109	Acrylonitrile		4.89E-15	3.39E-17	4.92E-15
110	Aldrin		1.26E-18	1.05E-17	1.18E-17
111	Aniline		1.53E-17	7.37E-17	8.90E-17
112	Benzene		4.47E-19	5.17E-22	4.47E-19
113	Bis(2-ethylhexyl)phthalate		4.61E-20	1.39E-18	1.44E-18
114	Carbazole		5.38E-19	1.56E-18	2.09E-18
115	Carbon Tetrachloride		1.02E-17	1.76E-19	1.03E-17
116	Chloroform		5.37E-17	7.02E-20	5.38E-17
117	1,4-Dichlorobenzene		2.34E-20	4.06E-22	2.38E-20
118	1,1-Dichloroethane		NE	NE	NE
119	1,2-Dichloroethane		1.25E-18	7.56E-18	8.81E-18
120	1,1-Dichloroethene		2.83E-17	2.46E-19	2.86E-17
121	1,2-Dichloropropane		5.94E-19	1.03E-20	6.04E-19
122	Dieldrin		2.18E-18	7.44E-17	7.66E-17
123	Hexachlorobenzene		5.77E-16	3.71E-16	9.48E-16
124	Hydrazine		7.97E-12	8.78E-10	8.86E-10
125	Lindane		8.24E-20	2.43E-19	3.26E-19
126	Methyl chloride		1.15E-19	4.13E-21	1.19E-19
127	Methylene chloride		1.55E-17	1.44E-19	1.56E-17
128	4-Methylphenol		NE	NE	NE
129	Monomethyl hydrazine		1.62E-13	6.99E-11	7.01E-11
130	n-Nitrosodimethylamine		7.62E-15	2.02E-12	2.03E-12
131	PAHs				
132	Benzo(a)pyrene		7.30E-15	3.68E-14	4.41E-14
133	Chrysene		7.30E-16	3.71E-15	4.44E-15
134	Dibenzo(a,h)anthracene		7.30E-15	3.73E-14	4.46E-14
135	Parathion		NE	NE	NE
136	Quinoline		1.62E-15	5.95E-15	7.56E-15
137	Tetrachloroethene		8.33E-21	2.23E-21	1.06E-20
138	Trichloroethene		2.96E-19	5.14E-21	3.01E-19
139	Vapona		3.40E-19	1.27E-18	1.61E-18
140	Vinyl chloride		4.55E-18	6.15E-19	5.16E-18
141					
142	INORGANICS				
143	Arsenic		2.37E-13	NA	2.37E-13
144	Cadmium		5.58E-16	NA	5.58E-16
145	Chromium (VI)		5.85E-16	NA	5.85E-16
146					
147	Total		8.40E-12	9.50E-10	9.59E-10

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
98	TABLE 32										
99	TOTAL LIFETIME CARCINOGENIC RISK										
100											
101											
102	RES-B										
103	BASE CASE										
104											
105											
106											
107											
108	ORGANICS										
109	Acrylonitrile		1.24E-14	3.39E-17	NA	NA	NA	NA	NA	NA	1.24E-14
110	Aldrin		3.19E-18	7.05E-17	1.14E-16	1.08E-18	1.34E-19	4.66E-19	5.13E-26	3.32E-19	1.30E-16
111	Aniline		3.88E-17	1.37E-17	6.98E-16	3.35E-21	1.08E-21	5.65E-18	1.43E-21	4.03E-18	8.20E-16
112	Benzene		1.13E-18	5.17E-22	NA	NA	NA	NA	NA	NA	1.13E-18
113	Bis(2-ethylhexyl)phthalate		1.17E-19	1.39E-18	3.17E-18	7.46E-19	7.33E-20	1.70E-20	4.89E-26	1.21E-20	5.53E-18
114	Carbazole		1.36E-18	1.56E-18	3.75E-18	1.21E-21	3.85E-22	1.98E-19	7.11E-23	1.41E-19	7.01E-17
115	Carbon tetrachloride		2.57E-17	1.76E-19	NA	NA	NA	NA	NA	NA	2.58E-17
116	Chloroform		1.36E-16	7.02E-20	NA	NA	NA	NA	NA	NA	1.36E-16
117	1,4-Dichlorobenzene		5.91E-20	4.06E-22	NA	NA	NA	NA	NA	NA	5.95E-20
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		3.17E-18	7.56E-18	8.57E-17	4.80E-22	1.55E-22	4.62E-19	5.60E-24	3.29E-19	9.73E-17
120	1,1-Dichloroethene		7.16E-17	2.46E-19	NA	NA	NA	NA	NA	NA	7.18E-17
121	1,2-Dichloropropane		1.50E-18	1.03E-20	NA	NA	NA	NA	NA	NA	1.51E-18
122	Dieldrin		5.52E-18	7.44E-17	1.33E-15	1.81E-19	3.52E-20	8.05E-19	1.86E-23	5.74E-19	1.41E-15
123	Hexachlorobenzene		1.46E-15	3.71E-16	3.35E-15	1.54E-17	3.83E-18	2.13E-16	7.40E-19	1.52E-16	5.56E-15
124	Hydrazine		2.01E-11	8.78E-10	1.74E-08	6.49E-18	2.10E-18	5.15E-13	1.14E-19	3.67E-13	1.83E-08
125	Lindane		2.08E-19	2.43E-19	6.67E-19	1.88E-22	5.95E-23	3.04E-20	6.61E-26	2.17E-20	1.17E-18
126	Methyl chloride		2.92E-19	4.13E-21	NA	NA	NA	NA	NA	NA	2.96E-19
127	Methylene chloride		3.91E-17	1.44E-19	NA	NA	NA	NA	NA	NA	3.92E-17
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		4.09E-13	6.99E-11	1.40E-09	7.50E-19	2.42E-19	5.96E-14	1.32E-20	4.25E-14	1.47E-09
130	n-Nitrosodimethylamine		1.93E-14	2.02E-12	3.88E-11	3.61E-19	1.16E-19	2.81E-15	0.00E+00	2.00E-15	4.09E-11
131	PAHs										
132	Benzo(a)pyrene		1.85E-14	3.68E-14	4.61E-15	1.69E-15	2.99E-16	5.07E-15	1.73E-18	3.62E-15	7.05E-14
133	Chrysene		1.85E-15	3.71E-15	3.57E-15	5.88E-17	1.33E-17	5.07E-16	4.39E-18	3.62E-16	1.01E-14
134	Dibenzo(a,h)anthracene		1.85E-14	3.73E-14	8.10E-15	1.95E-15	3.35E-16	5.07E-15	9.83E-16	3.62E-15	7.58E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		4.09E-15	5.95E-15	3.63E-14	1.06E-18	3.40E-19	5.96E-16	8.19E-20	4.25E-16	4.74E-14
137	Tetrachloroethene		2.10E-20	2.23E-21	NA	NA	NA	NA	NA	NA	2.33E-20
138	Trichloroethene		7.48E-19	5.14E-21	NA	NA	NA	NA	NA	NA	7.53E-19
139	Vapona		8.59E-19	1.27E-18	8.29E-18	1.20E-22	3.88E-23	1.25E-19	6.60E-26	8.93E-20	1.06E-17
140	Vinyl chloride		1.15E-17	6.15E-19	NA	NA	NA	NA	NA	NA	1.21E-17
141											
142	INORGANICS										
143	Arsenic		5.99E-13	NA	1.97E-15	4.69E-15	5.07E-17	1.02E-14	8.20E-15	7.26E-15	6.31E-13
144	Cadmium		1.41E-15	NA	NA	NA	NA	NA	NA	NA	1.41E-15
145	Chromium (VI)		1.48E-15	NA	NA	NA	NA	NA	NA	NA	1.48E-15
146											
147	Total		2.12E-11	9.50E-10	1.88E-08	8.41E-15	7.06E-16	5.99E-13	9.19E-15	4.27E-13	1.98E-08

A	B	C	AN	AO	AP	AQ
98			AN	AO	AP	AQ
99			AO	AP	AQ	
100			AP	AQ		
101			AQ			
102	RES-B		INHALATION	INGESTION	DERMAL	TOTAL
103	BASE CASE		CARC. RISK	CARC. RISK	CARC. RISK	LIFETIME
104						CARC. RISK
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		1.24E-14	3.39E-17	NA	1.24E-14
110	Aldrin		3.19E-18	1.27E-16	3.32E-19	1.30E-16
111	Aniline		3.88E-17	7.77E-16	4.03E-18	8.20E-16
112	Benzene		1.13E-18	5.17E-22	NA	1.13E-18
113	Bis(2-ethylhexyl)phthalate		1.17E-19	5.40E-18	1.21E-20	5.53E-18
114	Carbazole		1.36E-18	5.51E-18	1.41E-19	7.01E-18
115	Carbon Tetrachloride		2.57E-17	1.76E-19	NA	2.58E-17
116	Chloroform		1.36E-16	7.02E-20	NA	1.36E-16
117	1,4-Dichlorobenzene		5.91E-20	4.06E-22	NA	5.95E-20
118	1,1-Dichloroethane		NE	NE	NE	NE
119	1,2-Dichloroethane		3.17E-18	9.38E-17	3.29E-19	9.73E-17
120	1,1-Dichloroethene		7.16E-17	2.46E-19	NA	7.18E-17
121	1,2-Dichloropropane		1.50E-18	1.03E-20	NA	1.51E-18
122	Dieldrin		5.52E-18	1.41E-15	5.74E-19	1.41E-15
123	Hexachlorobenzene		1.46E-15	3.95E-15	1.52E-16	5.56E-15
124	Hydrazine		2.01E-11	1.83E-08	3.67E-13	1.83E-08
125	Lindane		2.08E-19	9.41E-19	2.17E-20	1.17E-18
126	Methyl chloride		2.92E-19	4.13E-21	NA	2.96E-19
127	Methylene chloride		3.91E-17	1.44E-19	NA	3.92E-17
128	4-Methylphenol		NE	NE	NE	NE
129	Monomethyl hydrazine		4.09E-13	1.47E-09	4.25E-14	1.47E-09
130	n-Nitrosodimethylamine		1.93E-14	4.08E-11	2.00E-15	4.09E-11
131	PAHs					
132	Benzo(a)pyrene		1.85E-14	4.84E-14	3.62E-15	7.05E-14
133	Chrysene		1.85E-15	7.86E-15	3.62E-16	1.01E-14
134	Dibenzo(a,h)anthracene		1.85E-14	5.38E-14	3.62E-15	7.58E-14
135	Parathion		NE	NE	NE	NE
136	Quinoline		4.09E-15	4.29E-14	4.25E-16	4.74E-14
137	Tetrachloroethene		2.10E-20	2.23E-21	NA	2.33E-20
138	Trichloroethene		7.48E-19	5.14E-21	NA	7.53E-19
139	Vapona		8.59E-19	9.69E-18	8.93E-20	1.06E-17
140	Vinyl chloride		1.15E-17	6.15E-19	NA	1.21E-17
141						
142	INORGANICS					
143	Arsenic		5.99E-13	2.51E-14	7.26E-15	6.31E-13
144	Cadmium		1.41E-15	NA	NA	1.41E-15
145	Chromium (VI)		1.48E-15	NA	NA	1.48E-15
146						
147	Total		2.12E-11	1.98E-08	4.27E-13	1.98E-08

TABLE 34
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D	E	F
		Inhalation RfD	Oral RfD	Dermal RfD
155	RES-B			
156	BASE CASE			
157				
158				
159				
160				
161				
162				
163				
164				
165				
166	ORGANICS			
167	Acetone	1.82E+00	1.00E-01	NC
168	Acetonitrile	1.00E-02	6.00E-02	3.00E-02
169	Acrylonitrile	4.39E-03	2.70E-04	NC
170	Aldrin	2.55E-04	3.00E-05	1.50E-05
171	Aniline	7.76E-03	1.95E-03	9.75E-04
172	Atrazine	5.10E-03	5.00E-03	2.50E-03
173	Benzaldehyde	1.00E-01	1.00E-01	5.00E-02
174	Benzene	3.26E-02	1.00E-03	NC
175	Benzofuran	5.00E-03	5.00E-03	2.50E-03
176	Benzoic Acid	4.00E+00	4.00E+00	2.00E+00
177	Benzonitrile	8.00E-03	8.00E-03	4.00E-03
178	Benothiazole	1.00E-03	1.00E-03	5.00E-04
179	Biphenyl	1.33E-03	5.00E-02	NC
180	Bis(2-ethylhexyl)phthalate	5.10E-03	4.00E-03	1.00E-02
181	Carbazole	5.00E-03	5.00E-03	2.50E-03
182	Carbon Tetrachloride	3.16E-02	7.00E-04	NC
183	4-Chloroaniline	4.00E-03	4.00E-03	2.00E-03
184	Chlorobenzene	5.00E-03	2.00E-02	NC
185	4-Chlorobiphenyl	2.45E-02	2.45E-02	1.22E-02
186	4,4'-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
187	Chloroethane	2.65E+00	NA	NC
188	Chloroform	5.00E-02	1.00E-02	NC
189	Dibenzofuran	NA	NA	NA
190	Dichlorobenzenes (total)	4.00E-02	9.00E-02	NC
191	1,1-Dichloroethane	1.00E-01	1.00E-01	NC
192	1,2-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
193	1,1-Dichloroethene	2.04E-02	9.00E-03	NC
194	1,2-Dichloroethene	8.10E-01	2.00E-02	NC
195	1,2-Dichloropropane	3.54E-01	8.60E-03	NC
196	Dieldrin	2.55E-04	5.00E-05	2.50E-05
197	Dimethyldisulfide	8.10E-03	8.10E-03	NC
198	Hexachlorobenzene	8.00E-04	8.00E-04	4.00E-04
199	Hydrazine	1.33E-04	6.00E-04	3.00E-04
200	Lindane	5.10E-04	3.00E-04	1.50E-04
201	Malathion	1.02E-02	2.00E-02	1.00E-02
202	Methyl chloride	1.05E-01	1.80E-02	NC
203	Methylene chloride	8.57E-01	6.00E-02	NC
204	Methyl ethyl ketone	9.00E-02	5.00E-01	2.50E-01
205	4-Methylphenol	1.02E-02	5.00E-02	2.50E-02
206	Monomethyl hydrazine	1.94E-05	2.20E-04	1.10E-04
207	Naphthalene	5.10E-02	4.00E-03	2.00E-03
208	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
209	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
210	PAHs			
211	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
212	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
213	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
214	Chrysene	3.00E-02	3.00E-02	1.50E-02

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155 B	C	D	E	F
		TABLE 34		
156	Dibenzo(a,h)anthracene	3.00E-02	3.00E-02	1.50E-02
215	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
216	Fluorene	4.00E-02	4.00E-02	2.00E-02
217	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
218	Pyrene	3.00E-02	3.00E-02	1.50E-02
219	Parathion	5.10E-05	6.00E-03	3.00E-03
220	Pentachlorobenzene	8.00E-04	6.00E-04	4.00E-04
221	Phenol	1.94E-02	6.00E-01	3.00E-01
222	Pyridine	1.63E-02	1.00E-03	NC
223	Quinoline	2.00E-01	2.00E-01	1.00E-01
224	Tetrachlorobenzene	3.00E-04	3.00E-04	1.50E-04
225	Tetrachloroethene	3.46E-01	1.00E-02	NC
226	Toluene	5.71E-01	2.00E-01	NC
227	Trichlorobenzene	3.00E-03	2.00E-02	1.00E-02
228	Trichloroethene	2.74E-01	7.35E-03	NC
229	Unsym. dimethyl hydrazine	1.22E-03	1.22E-03	6.10E-04
230	Vapona	8.00E-04	8.00E-04	4.00E-04
231	Vinyl acetate	2.00E-01	1.00E+00	NC
232	Vinyl chloride	1.33E-02	1.30E-03	NC
233	Xylenes (total)	8.57E-02	2.00E+00	NC
234				
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

TABLE 35 ADULT HAZARD INDEX		H	I	J	K	L	M	N	O
B	C	INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX
155	RES-B	1.38E-15	NA	NA	NA	NA	NA	NA	1.38E-15
156	BASE CASE	2.27E-10	3.25E-10	4.04E-17	1.57E-17	1.91E-13	1.29E-19	1.41E-13	5.52E-10
157		2.20E-10	NA	NA	NA	NA	NA	NA	2.20E-10
158		1.38E-14	2.25E-13	4.83E-14	5.48E-15	5.94E-16	9.36E-23	4.37E-16	2.94E-13
159		1.64E-11	6.17E-11	2.38E-16	9.12E-17	3.31E-13	1.20E-16	2.43E-13	7.87E-11
160		1.54E-13	4.05E-14	4.33E-18	1.35E-18	7.97E-16	0.00E+00	5.86E-16	1.96E-13
161		5.81E-13	2.74E-13	3.87E-18	1.44E-18	2.94E-15	2.51E-19	2.16E-15	8.60E-13
162		2.24E-14	NA	NA	NA	NA	NA	NA	2.24E-14
163		5.65E-11	1.46E-11	1.53E-15	4.80E-16	2.86E-13	1.11E-16	2.10E-13	7.16E-11
164		7.11E-15	2.22E-15	7.25E-20	2.60E-20	3.60E-17	5.49E-21	2.65E-17	9.39E-15
165	ORGANICS	7.76E-11	3.35E-11	5.63E-16	2.08E-16	3.93E-13	3.73E-17	2.89E-13	1.12E-10
166	Acetonitrile	2.64E-13	7.23E-14	3.16E-18	1.12E-18	1.34E-15	2.51E-21	9.89E-16	3.39E-13
167	Acrylonitrile	2.14E-10	NA	NA	NA	NA	NA	NA	2.14E-10
168	Aldrin	3.06E-14	5.71E-14	3.42E-13	3.84E-14	1.98E-16	8.13E-22	2.91E-17	4.69E-13
169	Aniline	2.55E-13	4.27E-14	1.72E-17	4.46E-18	1.29E-15	6.61E-19	9.49E-16	3.00E-13
170	Atrazine	1.17E-13	NA	NA	NA	NA	NA	NA	1.17E-13
171	Benzaldehyde	1.82E-14	5.44E-15	1.78E-19	6.41E-20	9.23E-17	2.36E-19	6.79E-17	2.38E-14
172	Benzene	3.51E-14	NA	NA	NA	NA	NA	NA	3.51E-14
173	Benzofuran	7.34E-15	6.12E-16	1.07E-17	1.55E-18	3.71E-17	1.39E-20	2.74E-17	8.03E-15
174	Benzoic Acid	3.88E-16	2.65E-17	2.54E-18	3.20E-19	1.97E-18	2.45E-22	1.45E-18	4.21E-16
175	Benzonitrile	2.43E-15	NE	NE	NE	NE	NE	NE	2.43E-15
176	Benzothiazole	6.28E-13	NA	NA	NA	NA	NA	NA	6.28E-13
177	Biphenyl	NE	NE	NE	NE	NE	NE	NE	NE
178	Bis(2-ethylhexyl)phthalate	1.82E-14	NA	NA	NA	NA	NA	NA	1.82E-14
179	Carbazole	2.09E-14	NA	NA	NA	NA	NA	NA	2.09E-14
180	Carbon Tetrachloride	1.60E-14	1.92E-13	8.88E-19	3.30E-19	6.75E-16	1.17E-20	4.97E-16	2.10E-13
181	4-Chloroaniline	5.48E-14	NA	NA	NA	NA	NA	NA	5.48E-14
182	Chlorobenzene	1.19E-15	NA	NA	NA	NA	NA	NA	1.19E-15
183	4-Chlorobiphenyl	1.17E-15	NA	NA	NA	NA	NA	NA	1.17E-15
184	4,4'-Chlorobiphenyl	2.53E-14	1.65E-12	3.42E-15	4.05E-16	6.54E-16	2.16E-20	4.81E-16	1.68E-12
185	Chloroethane	2.19E-13	NA	NA	NA	NA	NA	NA	2.19E-13
186	Chloroform	2.14E-11	3.08E-12	1.09E-13	1.40E-14	1.08E-13	5.38E-16	7.95E-14	2.47E-11
187	Dibenzofuran	2.14E-11	9.35E-06	2.76E-15	1.08E-15	1.86E-10	5.87E-17	1.37E-10	9.51E-06
188	Dichlorobenzenes (total)	5.89E-15	1.91E-15	6.85E-19	1.77E-19	5.07E-17	1.58E-22	3.73E-17	7.89E-15
189	1,1-Dichloroethane	8.70E-16	5.16E-17	1.63E-20	4.82E-21	2.24E-18	0.00E+00	1.65E-18	9.25E-16
190	1,2-Dichloroethane	8.26E-15	NA	NA	NA	NA	NA	NA	8.26E-15
191	1,2-Dichloropropane	6.10E-14	NA	NA	NA	NA	NA	NA	6.10E-14
192	Dieldrin	1.22E-14	9.08E-15	4.22E-21	1.64E-21	1.11E-17	0.00E+00	8.16E-18	2.13E-14
193	Dimethyldisulfide	9.75E-14	1.29E-14	2.20E-19	7.82E-20	1.01E-16	5.43E-22	7.40E-17	1.11E-13
194	Hexachlorobenzene	3.30E-07	5.52E-06	2.37E-15	9.30E-16	1.60E-10	5.07E-17	1.18E-10	5.88E-06
195	Hydrazine	2.30E-15	6.53E-15	2.18E-18	5.53E-19	1.48E-16	3.71E-17	1.09E-16	9.13E-15
196	Lindane	1.22E-11	3.46E-11	1.15E-14	2.92E-15	7.85E-13	8.55E-16	5.78E-13	4.81E-11
197	Malathion	2.53E-11	2.69E-09	1.94E-17	7.58E-18	1.28E-13	0.00E+00	9.41E-14	2.72E-09
198	Methyl chloride	4.71E-13	1.12E-13	1.26E-16	2.40E-17	2.38E-15	1.75E-18	1.75E-15	5.87E-13
199	Methylene chloride	4.71E-13	5.73E-14	9.46E-17	1.92E-17	2.38E-15	6.78E-19	1.75E-15	5.32E-13
200	Methyl ethyl ketone	1.89E-12	1.45E-14	8.25E-14	9.63E-15	9.56E-16	4.67E-18	7.03E-15	2.05E-12
201	4-Methylphenol	1.89E-12	1.45E-14	1.98E-15	2.43E-16	9.56E-16	1.18E-17	7.03E-16	2.07E-13
202	Monomethyl hydrazine								
203	Naphthalene								
204	Naphthalene carbonitrile								
205	n-Nitrosodimethylamine								
206	PAHs								
207	Acenaphthalene								
208	Acenaphthene								
209	Benzo(a)pyrene								
210	Chrysene								

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	H	I	J	K	L	M	N	O
155		TABLE 35							
156									
215	Dibenzo(a,h)anthracene	1.89E-12	6.60E-14	9.90E-14	1.15E-14	9.56E-15	2.65E-15	7.03E-15	2.08E-12
216	Fluoranthene	1.42E-12	1.79E-13	4.16E-15	5.58E-16	7.17E-15	NA	5.28E-15	1.61E-12
217	Fluorene	1.42E-13	2.12E-14	6.99E-17	1.19E-17	7.17E-16	7.30E-19	5.28E-16	1.64E-13
218	Phenanthrene	7.36E-16	8.52E-17	5.36E-19	8.53E-20	3.72E-18	3.35E-18	2.74E-18	8.31E-16
219	Pyrene	3.78E-12	4.52E-13	1.02E-14	1.37E-15	1.91E-14	5.35E-17	1.41E-14	4.28E-12
220	Parathion	2.75E-13	2.98E-16	3.84E-19	8.15E-20	1.18E-17	5.29E-23	8.71E-18	2.76E-13
221	Pentachlorobenzene	8.70E-12	2.23E-12	1.88E-14	2.60E-15	4.40E-14	NA	3.24E-14	1.10E-11
222	Phenol	5.74E-15	2.67E-16	1.21E-21	4.50E-22	9.39E-19	NA	6.91E-19	6.01E-15
223	Pyridine	3.81E-11	NA	NA	NA	NA	NA	NA	3.81E-11
224	Quinoline	3.19E-14	1.55E-14	3.91E-19	1.38E-19	1.62E-16	3.17E-20	1.19E-16	4.77E-14
225	Tetrachlorobenzene	1.14E-11	6.45E-12	5.51E-15	9.40E-16	5.77E-14	NA	4.25E-14	1.80E-11
226	Tetrachloroethene	3.45E-16	NA	NA	NA	NA	NA	NA	3.45E-16
227	Toluene	3.34E-15	NA	NA	NA	NA	NA	NA	3.34E-15
228	Trichlorobenzene	5.77E-13	7.18E-15	1.95E-17	3.86E-18	4.38E-16	4.80E-19	3.22E-16	5.85E-13
229	Trichloroethene	4.65E-15	NA	NA	NA	NA	NA	NA	4.65E-15
230	Unsym. dimethyl hydrazine	2.25E-08	2.56E-06	3.19E-15	1.25E-15	1.14E-10	3.60E-17	8.38E-11	2.58E-06
231	Vapona	6.94E-14	3.59E-14	4.24E-19	1.58E-19	3.51E-16	2.64E-22	2.58E-16	1.06E-13
232	Vinyl acetate	3.94E-15	NA	NA	NA	NA	NA	NA	3.94E-15
233	Vinyl chloride	5.49E-14	NA	NA	NA	NA	NA	NA	5.49E-14
234	Xylenes (total)	1.59E-15	NA	NA	NA	NA	NA	NA	1.59E-15
235									
236	INORGANICS								
237	Arsenic	3.67E-09	1.80E-11	1.08E-11	1.33E-13	3.78E-12	4.36E-12	2.78E-12	3.71E-09
238	Cadmium	8.50E-11	1.72E-13	1.27E-14	3.54E-16	2.19E-14	NA	1.61E-14	8.52E-11
239	Chromium (III)	3.77E-11	NA	NA	NA	NA	NA	NA	3.77E-11
240	Chromium (VI)	1.33E-11	NA	NA	NA	NA	NA	NA	1.33E-11
241	Copper	2.84E-12	NA	NA	NA	NA	1.39E-14	NA	2.86E-12
242	Iron	6.77E-07	NA	NA	NA	NA	NA	NA	6.77E-07
243	Mercury	3.27E-10	4.35E-12	1.18E-13	4.35E-12	4.73E-13	NA	3.48E-13	3.37E-10
244	Selenium	4.16E-10	NA	NA	NA	NA	NA	NA	4.16E-10
245	Silver	3.80E-11	NA	NA	NA	NA	NA	NA	3.80E-11
246	Zinc	2.72E-11	NA	NA	NA	NA	1.01E-14	NA	2.72E-11
247									
248	Total (Hazard Index)	1.23E-06	1.74E-05	1.17E-11	4.58E-12	4.67E-10	4.38E-12	3.43E-10	1.87E-05

TABLE 36 CHILD HAZARD INDEX		Q	R	S	T	U	V	W	X	
155	B	C	INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL CHILD HAZARD INDEX
156	RES-B									
157	BASE CASE									
158										
159										
160										
161	RES-B									
162	BASE CASE									
163										
164										
165										
166	ORGANICS									
167	Acetone		3.11E-15	NA	NA	NA	NA	NA	NA	3.11E-15
168	Acetonitrile		5.12E-10	5.81E-10	2.33E-16	3.93E-17	1.73E-12	2.92E-19	1.18E-12	1.10E-09
169	Acrylonitrile		4.96E-10	NA	NA	NA	NA	NA	NA	4.96E-10
170	Aldrin		3.12E-14	3.39E-13	2.79E-13	1.37E-14	5.36E-15	2.11E-22	3.65E-15	6.72E-13
171	Aniline		3.71E-11	1.24E-10	1.38E-15	2.27E-16	2.99E-12	2.70E-16	2.04E-12	1.66E-10
172	Atrazine		3.49E-13	6.88E-14	2.50E-17	3.38E-18	7.20E-15	0.00E+00	4.90E-15	4.30E-13
173	Benzaldehyde		1.31E-12	5.42E-13	2.23E-17	3.58E-18	2.65E-14	5.67E-19	1.81E-14	1.90E-12
174	Benzene		5.06E-14	NA	NA	NA	NA	NA	NA	5.06E-14
175	Benzofuran		1.28E-10	2.49E-11	8.85E-15	1.20E-15	2.58E-12	2.50E-16	1.76E-12	1.57E-10
176	Benzoic Acid		1.61E-14	4.30E-15	4.19E-19	6.49E-20	3.25E-16	1.24E-20	2.21E-16	2.09E-14
177	Benzonitrile		1.75E-10	6.60E-11	3.25E-15	5.18E-16	3.55E-12	8.43E-17	2.42E-12	2.47E-10
178	Benzothiazole		5.97E-13	1.39E-13	1.83E-17	2.79E-18	1.21E-14	5.67E-21	8.24E-15	7.56E-13
179	Biphenyl		4.83E-10	NA	NA	NA	NA	NA	NA	4.83E-10
180	Bis(2-ethylhexyl)phthalate		6.91E-14	8.59E-14	1.98E-12	9.59E-14	1.78E-15	1.83E-21	2.43E-16	2.23E-12
181	Carbazole		5.76E-13	7.10E-14	9.91E-17	1.11E-17	1.17E-14	1.49E-18	7.94E-15	6.66E-13
182	Carbon Tetrachloride		2.64E-13	NA	NA	NA	NA	NA	NA	2.64E-13
183	4-Chloroaniline		4.12E-14	1.08E-14	1.03E-18	1.60E-19	8.34E-16	5.34E-19	5.68E-16	5.34E-14
184	Chlorobenzene		7.92E-14	NA	NA	NA	NA	NA	NA	7.92E-14
185	4-Chlorobiphenyl		1.66E-14	9.94E-16	6.21E-17	3.87E-18	3.35E-16	3.13E-20	2.29E-16	1.82E-14
186	4,4'-Chlorobiphenyl		8.77E-16	4.32E-17	1.46E-17	7.97E-19	1.78E-17	5.53E-22	1.21E-17	9.65E-16
187	Chloroethane		5.49E-15	NE	NE	NE	NE	NE	NE	5.49E-15
188	Chloroform		1.42E-12	NA	NA	NA	NA	NA	NA	1.42E-12
189	Dibenzofuran		NE	NE	NE	NE	NE	NE	NE	NE
190	Dichlorobenzenes (total)		4.12E-14	NA	NA	NA	NA	NA	NA	4.12E-14
191	1,1-Dichloroethane		4.71E-14	NA	NA	NA	NA	NA	NA	4.71E-14
192	1,2-Dichloroethane		3.61E-14	3.18E-13	5.13E-18	8.23E-19	6.10E-15	2.64E-20	4.15E-15	3.65E-13
193	1,1-Dichloroethene		2.69E-15	NA	NA	NA	NA	NA	NA	1.24E-13
194	1,2-Dichloroethene		2.69E-15	NA	NA	NA	NA	NA	NA	2.69E-15
195	1,2-Dichloropropane		2.64E-15	NA	NA	NA	NA	NA	NA	2.64E-15
196	Dieldrin		5.72E-14	2.48E-12	1.98E-14	1.01E-15	5.91E-15	4.87E-20	4.03E-15	2.57E-12
197	Dimethyldisulfide		4.95E-13	NA	NA	NA	NA	NA	NA	4.95E-13
198	Hexachlorobenzene		4.82E-11	4.81E-12	6.30E-13	3.48E-14	9.76E-13	1.21E-15	6.65E-13	5.53E-11
199	Hydrazine		3.75E-07	1.75E-05	1.59E-14	2.70E-15	1.68E-09	1.33E-16	1.15E-09	1.79E-05
200	Lindane		1.33E-14	3.14E-15	3.95E-18	4.42E-19	4.58E-16	3.56E-22	3.12E-16	1.72E-14
201	Malathion		1.96E-15	9.55E-17	9.42E-20	1.20E-20	2.03E-17	0.00E+00	1.38E-17	2.09E-15
202	Methyl chloride		1.86E-14	NA	NA	NA	NA	NA	NA	1.86E-14
203	Methylene chloride		3.8E-13	NA	NA	NA	NA	NA	NA	1.38E-13
204	Methyl ethyl ketone		2.75E-14	1.60E-14	2.44E-20	4.08E-21	1.00E-16	0.00E+00	6.82E-17	4.37E-14
205	4-Methylphenol		2.20E-13	2.18E-14	1.27E-18	1.95E-19	9.09E-16	1.23E-21	6.19E-16	2.43E-13
206	Monomethyl hydrazine		8.10E-07	1.13E-05	1.37E-14	2.32E-15	1.45E-09	1.14E-16	9.85E-10	1.21E-05
207	Naphthalene		5.19E-15	1.06E-14	1.26E-17	1.38E-18	1.34E-15	8.38E-17	9.13E-16	1.81E-14
208	Naphthalene carbonitrile		2.75E-11	5.58E-11	6.64E-14	7.29E-15	7.09E-12	1.93E-15	4.83E-12	9.53E-11
209	n-Nitrosodimethylamine		5.71E-11	4.13E-09	1.12E-16	1.89E-17	1.16E-12	0.00E+00	7.87E-13	4.19E-09
210	PAHS									
211	Acenaphthalene		1.06E-12	1.74E-13	7.26E-16	6.00E-17	2.15E-14	3.95E-18	1.47E-14	1.27E-12
212	Acenaphthene		1.06E-12	9.37E-14	5.46E-16	4.79E-17	2.15E-14	1.53E-18	1.47E-14	1.19E-12
213	Benzo(a)pyrene		4.27E-12	1.00E-13	4.76E-13	2.40E-14	8.64E-14	1.06E-17	5.88E-14	5.01E-12
214	Chrysene		4.27E-13	2.35E-14	1.14E-14	6.05E-16	8.64E-15	2.67E-17	5.88E-15	4.77E-13

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	Q	R	S	T	U	V	W	X
155		TABLE 36							
156	D'benzo(a,h)anthracene	4.27E-12	1.15E-13	5.72E-13	2.87E-14	8.64E-14	5.98E-15	5.88E-14	5.13E-12
215	Fluoranthene	3.20E-12	2.82E-13	2.40E-14	1.39E-15	6.48E-14	NA	4.41E-14	3.62E-12
216	Fluorene	3.20E-13	3.36E-14	4.04E-16	2.96E-17	6.48E-15	1.65E-18	4.41E-15	3.65E-13
217	Phenanthrene	1.66E-15	1.36E-16	3.10E-18	2.13E-19	3.36E-17	7.57E-18	2.29E-17	1.87E-15
218	Pyrene	8.53E-12	7.14E-13	5.87E-14	3.42E-15	1.73E-13	1.21E-16	1.18E-13	9.60E-12
219	Parathion	6.22E-13	4.88E-16	2.22E-18	2.03E-19	1.07E-16	1.19E-22	7.29E-17	6.22E-13
220	Pentachlorobenzene	1.96E-11	3.42E-12	1.09E-13	6.48E-15	3.98E-13	NA	2.71E-13	2.39E-11
221	Phenol	1.30E-14	4.43E-16	6.99E-21	1.12E-21	8.49E-18	NA	5.78E-18	1.34E-14
222	Pyridine	8.59E-11	NA	NA	NA	NA	NA	NA	8.59E-11
223	Quinoline	7.21E-14	2.68E-14	2.26E-18	3.43E-19	1.46E-15	7.16E-20	9.94E-16	1.01E-13
224	Tetrachlorobenzene	2.57E-11	9.81E-12	3.18E-14	2.34E-15	5.21E-13	NA	3.55E-13	3.65E-11
225	Tetrachloroethene	7.80E-16	NA	NA	NA	NA	NA	NA	7.80E-16
226	Toluene	7.53E-15	1.21E-14	1.13E-16	9.63E-18	3.96E-15	1.08E-18	2.70E-15	7.53E-15
227	Trichlorobenzene	1.30E-12	NA	NA	NA	NA	NA	NA	1.32E-12
228	Trichloroethene	1.03E-14	NA	NA	NA	NA	NA	NA	1.03E-14
229	Unsym. dimethyl hydrazine	5.08E-08	4.73E-06	1.84E-14	3.12E-15	1.03E-09	8.13E-17	7.00E-10	4.78E-06
230	Vapona	1.57E-13	7.10E-14	2.45E-18	3.95E-19	3.17E-15	5.97E-22	2.16E-15	2.33E-13
231	Vinyl acetate	8.89E-15	NA	NA	NA	NA	NA	NA	8.89E-15
232	Vinyl chloride	1.24E-13	NA	NA	NA	NA	NA	NA	1.24E-13
233	Xylenes (total)	3.58E-15	NA	NA	NA	NA	NA	NA	3.58E-15
234									
235									
236	INORGANICS								
237	Arsenic	8.28E-09	3.31E-11	6.24E-11	3.31E-13	3.42E-11	9.84E-12	2.33E-11	8.44E-09
238	Cadmium	1.92E-10	3.04E-13	7.33E-14	8.82E-16	1.98E-13	NA	1.35E-13	1.93E-10
239	Chromium (III)	8.51E-11	NA	NA	NA	NA	NA	NA	8.51E-11
240	Chromium (VI)	2.99E-11	NA	NA	NA	NA	NA	NA	2.99E-11
241	Copper	6.42E-12	NA	NA	NA	NA	3.14E-14	NA	6.45E-12
242	Iron	1.53E-06	NA	NA	NA	NA	NA	NA	1.53E-06
243	Mercury	7.39E-10	7.46E-12	6.82E-13	1.09E-11	4.27E-12	NA	2.91E-12	7.65E-10
244	Selenium	9.40E-10	NA	NA	NA	NA	NA	NA	9.40E-10
245	Silver	8.58E-11	NA	NA	NA	NA	NA	NA	8.58E-11
246	Zinc	6.14E-11	NA	NA	NA	NA	2.29E-14	NA	6.14E-11
247									
248	Total (Hazard Index)	2.78E-06	3.36E-05	6.74E-11	1.14E-11	4.22E-09	9.90E-12	2.87E-09	3.63E-05

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

155 B	C	Z	AA	AB
156		TABLE 37		
157		INFANT HAZARD INDEX		
158				
159				
160				
161 RES-B				
162 BASE CASE				
163				
164				
165				
166 ORGANICS				
167 Acetone		2.03E-15	6.43E-16	2.68E-15
168 Acetonitrile		3.35E-10	1.32E-09	1.66E-09
169 Acrylonitrile		3.25E-10	1.63E-11	3.41E-10
170 Aldrin		2.04E-14	1.45E-12	1.47E-12
171 Aniline		2.43E-11	4.64E-10	4.88E-10
172 Atrazine		2.28E-13	7.25E-13	9.53E-13
173 Benzaldehyde		8.58E-13	3.13E-12	3.98E-12
174 Benzene		3.31E-14	1.25E-15	3.43E-14
175 Benzofuran		8.35E-11	2.60E-10	3.44E-10
176 Benzoic Acid		1.05E-14	3.41E-14	4.46E-14
177 Benzonitrile		1.15E-10	4.06E-10	5.21E-10
178 Benzothiazole		3.91E-13	1.23E-12	1.62E-12
179 Biphenyl		3.16E-10	1.46E-13	3.16E-10
180 Bis(2-ethylhexyl)phthalate		4.52E-14	1.74E-12	1.78E-12
181 Carbazole		3.77E-13	1.09E-12	1.47E-12
182 Carbon Tetrachloride		1.73E-13	1.36E-13	3.09E-13
183 4-Chloroaniline		2.70E-14	8.67E-14	1.14E-13
184 Chlorobenzene		5.18E-14	2.25E-16	5.21E-14
185 4-Chlorobiphenyl		1.08E-14	2.92E-14	4.00E-14
186 4,4'-Chlorobiphenyl		5.74E-16	1.53E-15	2.10E-15
187 Chloroethane		3.59E-15	NE	3.59E-15
188 Chloroform		9.29E-13	8.06E-14	1.01E-12
189 Dibenzofuran		NE	NE	NE
190 Dichlorobenzenes (total)		2.70E-14	2.08E-16	2.72E-14
191 1,1-Dichloroethane		3.09E-14	5.36E-16	3.14E-14
192 1,2-Dichloroethane		2.36E-14	1.19E-12	1.21E-12
193 1,1-Dichloroethene		8.10E-14	3.19E-15	8.41E-14
194 1,2-Dichloroethene		1.76E-15	1.24E-15	3.00E-15
195 1,2-Dichloropropane		1.73E-15	1.23E-15	2.96E-15
196 Dieldrin		3.75E-14	6.51E-12	6.55E-12
197 Dimethyldisulfide		3.24E-13	5.62E-15	3.30E-13
198 Hexachlorobenzene		3.16E-11	2.03E-11	5.18E-11
199 Hydrazine		2.45E-07	3.42E-05	3.44E-05
200 Lindane		8.70E-15	4.36E-14	5.23E-14
201 Malathion		1.28E-15	1.81E-15	3.10E-15
202 Methyl chloride		1.22E-14	1.24E-15	1.34E-14
203 Methylene chloride		9.02E-14	2.24E-14	1.13E-13
204 Methyl ethyl ketone		1.80E-14	4.11E-14	5.91E-14
205 4-Methylphenol		1.44E-13	1.20E-13	2.64E-13
206 Monomethyl hydrazine		5.30E-07	2.02E-05	2.07E-05
207 Naphthalene		3.40E-15	1.31E-13	1.35E-13
208 Naphthalene carbonitrile		1.80E-11	6.94E-10	7.12E-10
209 n-Nitrosodimethylamine		3.74E-11	9.90E-09	9.94E-09
210 PAHs				
211 Acenaphthalene		6.95E-13	2.13E-12	2.83E-12
212 Acenaphthene		6.95E-13	1.93E-12	2.63E-12
213 Benzo(a)pyrene		2.79E-12	7.46E-12	1.03E-11
214 Chrysene		2.79E-13	7.53E-13	1.03E-12

155 B	C	Z	AA	AB
		TABLE 37		
156				
215	Dibenzo(a,h)anthracene	2.79E-12	7.57E-12	1.04E-11
216	Fluoranthene	2.09E-12	5.86E-12	7.96E-12
217	Fluorene	2.09E-13	5.97E-13	8.06E-13
218	Phenanthrene	1.09E-15	3.02E-15	4.11E-15
219	Pyrene	5.58E-12	1.55E-11	2.11E-11
220	Parathion	4.07E-13	9.66E-15	4.16E-13
221	Pentachlorobenzene	1.29E-11	9.04E-12	2.19E-11
222	Phenol	8.48E-15	1.65E-15	1.01E-14
223	Pyridine	5.62E-11	1.59E-11	7.22E-11
224	Quinoline	4.72E-14	1.73E-13	2.21E-13
225	Tetrachlorobenzene	1.68E-11	1.47E-11	3.16E-11
226	Tetrachloroethene	5.10E-16	3.07E-16	8.17E-16
227	Toluene	4.93E-15	4.07E-17	4.97E-15
228	Trichlorobenzene	8.53E-13	7.75E-14	9.31E-13
229	Trichloroethene	6.87E-15	4.45E-15	1.13E-14
230	Unsym. dimethyl hydrazine	3.32E-08	9.40E-06	9.43E-06
231	Vapona	1.02E-13	3.85E-13	4.87E-13
232	Vinyl acetate	5.82E-15	2.02E-17	5.84E-15
233	Vinyl chloride	8.11E-14	1.44E-14	9.55E-14
234	Xylenes (total)	2.35E-15	5.82E-20	2.35E-15
235				
236	INORGANICS			
237	Arsenic	5.42E-09	NE	5.42E-09
238	Cadmium	1.26E-10	NE	1.26E-10
239	Chromium (III)	5.57E-11	NE	5.57E-11
240	Chromium (VI)	1.96E-11	NE	1.96E-11
241	Copper	4.20E-12	NE	4.20E-12
242	Iron	1.00E-06	NE	1.00E-06
243	Mercury	4.83E-10	NE	4.83E-10
244	Selenium	6.15E-10	NE	6.15E-10
245	Silver	5.62E-11	NE	5.62E-11
246	Zinc	4.02E-11	NE	4.02E-11
247				
248	Total (Hazard Index)	1.82E-06	6.38E-05	6.56E-05

A	B	C	D
253	TABLE 38		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256	RES-B		
257	BASE CASE		
258	Adult		
259	Inhalation	NA	
260			
261	Ingestion		82.8742
262	Vegetables		82.8724
263	Milk		0.0000
264	Beef		0.0000
265	Soil\Dust		0.0018
266	Fish		0.0000
267			
268	Dermal		0.0013
269			
270	Child		
271	Inhalation		6.0648
272			
273	Ingestion		12.2150
274	Vegetables		12.2137
275	Milk		0.0000
276	Beef		0.0000
277	Soil\Dust		0.0013
278	Fish		0.0000
279			
280	Dermal		0.0009
281			
282	Infant		
283	Inhalation		0.0424
284			
285	Breast Milk Ingestion		4.8013
286			
287	Total		100.0000
288			
290			

A	B	C	AS	AT
98			TABLE 39	
99			ADULT INHALATION CARCINOGENIC RISK	
100			(These numbers are for sensitivity	
101			analysis)	
102			INHALATION	
103	RES-B		ADULT	
104	BASE CASE		CARC.	
105			RISK	
106				
107				
108	ORGANICS			
109	Acrylonitrile		6.61E-15	
110	Aldrin		1.71E-18	
111	Aniline		2.08E-17	
112	Benzene		6.05E-19	
113	Bis(2-ethylhexyl)phthalate		6.24E-20	
114	Carbazole		7.28E-19	
115	Carbon Tetrachloride		1.37E-17	
116	Chloroform		7.27E-17	
117	1,4-Dichlorobenzene		3.16E-20	
118	1,1-Dichloroethane		NE	
119	1,2-Dichloroethane		1.70E-18	
120	1,1-Dichloroethene		3.83E-17	
121	1,2-Dichloropropane		8.04E-19	
122	Dieldrin		2.95E-18	
123	Hexachlorobenzene		7.81E-16	
124	Hydrazine		1.08E-11	
125	Lindane		1.12E-19	
126	Methyl chloride		1.56E-19	
127	Methylene chloride		2.09E-17	
128	4-Methylphenol		NE	
129	Monomethyl hydrazine		2.19E-13	
130	n-Nitrosodimethylamine		1.03E-14	
131	PAHS			
132	Benzo(a)pyrene		9.88E-15	
133	Chrysene		9.88E-16	
134	Dibenzo(a,h)anthracene		9.88E-15	
135	Parathion		NE	
136	Quinoline		2.19E-15	
137	Tetrachloroethene		1.13E-20	
138	Trichloroethene		4.01E-19	
139	Vapona		4.60E-19	
140	Vinyl chloride		6.15E-18	
141				
142	INORGANICS			
143	Arsenic		3.20E-13	
144	Cadmium		7.56E-16	
145	Chromium (VI)		7.92E-16	
146				
147	Total		1.14E-11	
148				
149				
150				

INHALATION EXPOSURE DURATION 2 YEARS

9.2.2 Sensitivity Case Emissions — Resident B

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 20-Jun-91

A	B	C	D	E	F	G	H	I	J	K
2	3	4	5	6	7	8	9	10	11	12
SENSITIVITY CASE	ER	AC	ANN. AMBIENT CONC.	AVG. ANN. AMBIENT CONC.	TOTAL DEPOSITION RATE	DRY DEPOSITION RATE	CO AVERAGE CALCULATED CONC IN SOIL	CO MAXIMUM CALCULATED CONC IN SOIL	CO AVERAGE CALCULATED CONC IN SOIL	CO MAXIMUM CALCULATED CONC IN SOIL
20-Jun-91 13:36:28 RES-B	g/sec	ug/M3	ug/M3	g/M2/yr	g/M2/yr	g/M2/yr	mg/Kg	mg/Kg	mg/Kg	mg/Kg
12 ORGANICS										
13 Acetone	1.26E-10	8.77E-12	NA	5.72E-10	NA	2.91E-11	3.96E-09	4.02E-09	7.92E-09	8.03E-09
14 Acetonitrile	1.14E-07	7.93E-09	NA	NA	NA	NA	NA	NA	NA	NA
15 Acrylonitrile	4.85E-08	3.38E-09	NA	NA	NA	NA	NA	NA	NA	NA
16 Aldrin	1.77E-13	1.23E-14	NA	8.89E-16	4.51E-17	4.51E-17	6.15E-15	6.24E-15	1.23E-14	1.25E-14
17 Aniline	6.41E-09	4.46E-10	NA	3.22E-11	1.63E-12	1.63E-12	2.23E-10	2.26E-10	4.45E-10	4.52E-10
18 Atrazine	3.96E-11	2.76E-12	NA	1.99E-13	1.01E-14	1.01E-14	1.38E-12	1.40E-12	2.75E-12	2.79E-12
19 Benzaldehyde	2.92E-09	2.03E-10	NA	1.47E-11	7.45E-13	7.45E-13	1.01E-10	1.03E-10	2.03E-10	2.06E-10
20 Benzene	3.67E-11	2.55E-12	NA	NA	NA	NA	NA	NA	NA	NA
21 Benzofuran	1.42E-08	9.88E-10	NA	7.13E-11	3.62E-12	3.62E-12	4.93E-11	5.00E-10	9.86E-10	1.00E-09
22 Benzoic Acid	1.43E-09	9.95E-11	NA	7.18E-12	3.65E-13	3.65E-13	4.97E-11	5.04E-11	9.93E-11	1.01E-10
23 Benzonitrile	3.12E-08	2.17E-09	NA	1.57E-10	7.96E-12	7.96E-12	1.08E-09	1.10E-09	2.17E-09	2.20E-09
24 Benzothiazole	1.33E-11	9.26E-13	NA	6.68E-14	3.39E-15	3.39E-15	4.62E-13	4.69E-13	9.24E-13	9.37E-13
25 Biphenyl	1.43E-08	9.95E-10	NA	NA	NA	NA	NA	NA	NA	NA
26 Bis(2-ethylhexyl)phthalate	7.85E-12	5.46E-13	NA	3.94E-14	2.00E-15	2.00E-15	2.73E-13	2.77E-13	5.45E-13	5.53E-13
27 Carbazole	6.41E-11	4.46E-12	NA	3.22E-13	1.63E-14	1.63E-14	2.23E-12	2.26E-12	4.45E-12	4.52E-12
28 Carbon Tetrachloride	1.86E-10	1.29E-11	NA	NA	NA	NA	NA	NA	NA	NA
29 4-Chloroaniline	3.67E-12	2.55E-13	NA	1.84E-14	9.36E-16	9.36E-16	1.27E-13	1.29E-13	2.55E-13	2.59E-13
30 Chlorobenzene	8.82E-12	6.14E-13	NA	NA	NA	NA	NA	NA	NA	NA
31 4-Chlorobiphenyl	9.04E-12	6.29E-13	NA	4.54E-14	2.31E-15	2.31E-15	3.14E-13	3.18E-13	6.28E-13	6.37E-13
32 4,4'-Chlorobiphenyl	4.55E-13	3.17E-14	NA	2.28E-15	1.16E-16	1.16E-16	1.59E-14	1.60E-14	3.16E-14	3.21E-14
33 Chloroethane	3.24E-10	2.26E-11	NA	1.63E-12	8.26E-14	8.26E-14	1.13E-11	1.14E-11	2.25E-11	2.28E-11
34 Chloroform	1.58E-09	1.10E-10	NA	NA	NA	NA	NA	NA	NA	NA
35 Dibenzofuran	2.85E-10	1.98E-11	NA	1.43E-12	7.27E-14	7.27E-14	9.90E-12	1.00E-11	1.98E-11	2.01E-11
36 Dichlorobenzenes (total)	3.67E-11	2.55E-12	NA	NA	NA	NA	NA	NA	NA	NA
37 1,4-Dichlorobenzene	2.32E-12	1.61E-13	NA	NA	NA	NA	NA	NA	NA	NA
38 1,1-Dichloroethane	1.05E-10	7.31E-12	NA	NA	NA	NA	NA	NA	NA	NA
39 1,2-Dichloroethane	3.28E-11	2.28E-12	NA	1.65E-13	8.36E-15	8.36E-15	1.14E-12	1.16E-12	2.28E-12	2.31E-12
40 1,1-Dichloroethene	5.62E-11	3.91E-12	NA	NA	NA	NA	NA	NA	NA	NA
41 1,2-Dichloroethene	4.88E-11	3.38E-12	NA	NA	NA	NA	NA	NA	NA	NA
42 1,2-Dichloropropane	2.08E-11	1.45E-12	NA	NA	NA	NA	NA	NA	NA	NA
43 Dieldrin	3.23E-13	2.26E-14	NA	1.63E-15	8.29E-17	8.29E-17	1.13E-14	1.14E-14	2.26E-14	2.29E-14
44 Dimethyldisulfide	8.93E-11	6.22E-12	NA	NA	NA	NA	NA	NA	NA	NA
45 Hexachlorobenzene	8.59E-10	5.98E-11	NA	4.31E-12	2.19E-13	2.19E-13	2.98E-11	3.03E-11	5.97E-11	6.05E-11
46 Hydrazine	1.11E-06	7.73E-08	NA	5.57E-09	2.83E-10	2.83E-10	3.85E-08	3.91E-08	7.71E-08	7.82E-08
47 Lindane	1.51E-13	1.05E-14	NA	7.58E-16	3.85E-17	3.85E-17	5.24E-15	5.32E-15	1.05E-14	1.06E-14
48 Malathion	4.46E-13	3.10E-14	NA	2.24E-15	1.14E-16	1.14E-16	1.55E-14	1.57E-14	3.10E-14	3.14E-14
49 Methyl chloride	4.36E-11	3.03E-12	NA	NA	NA	NA	NA	NA	NA	NA
50 Methylene chloride	2.63E-09	1.83E-10	NA	NA	NA	NA	NA	NA	NA	NA
51 Methyl ethyl ketone	5.51E-11	3.83E-12	NA	2.77E-13	1.41E-14	1.41E-14	1.91E-12	1.94E-12	3.83E-12	3.88E-12
52 4-Methylphenol	5.00E-11	3.48E-12	NA	2.51E-13	1.28E-14	1.28E-14	1.74E-12	1.76E-12	3.47E-12	3.52E-12
53 Monomethyl hydrazine	3.50E-07	2.44E-08	NA	1.76E-09	8.93E-11	8.93E-11	1.22E-08	1.23E-08	2.43E-08	2.47E-08
54 Naphthalene	5.90E-12	4.11E-13	NA	2.96E-14	1.50E-15	1.50E-15	2.05E-13	2.08E-13	4.10E-13	4.16E-13
55 Naphthalene carbonitrile	3.12E-08	2.17E-09	NA	1.57E-10	7.96E-12	7.96E-12	1.08E-09	1.10E-09	2.17E-09	2.20E-09
56 n-Nitrosodimethylamine	3.56E-10	2.48E-11	NA	1.79E-12	9.08E-14	9.08E-14	1.24E-11	1.25E-11	2.47E-11	2.51E-11
PAHS										
57 Acenaphthalene	1.42E-09	9.88E-11	NA	7.13E-12	3.62E-13	3.62E-13	4.93E-11	5.00E-11	9.86E-11	1.00E-10
58 Acenaphthene	1.42E-09	9.88E-11	NA	7.13E-12	3.62E-13	3.62E-13	4.93E-11	5.00E-11	9.86E-11	1.00E-10
59 Benzo(a)pyrene	2.85E-09	1.98E-10	NA	1.43E-11	7.27E-14	7.27E-14	9.90E-11	1.00E-10	1.98E-11	2.01E-10

A	B	C	D	E	F	G	H	I	J	K
2			TABLE 1-A							
61	Chrysene		2.85E-10	1.98E-11	1.43E-12	7.27E-14	9.90E-12	1.00E-11	1.98E-11	2.01E-11
62	Dibenzo(a,h)anthracene		2.85E-09	1.98E-10	1.43E-11	7.27E-13	9.90E-11	1.00E-10	1.98E-10	2.01E-10
63	Fluoranthene		2.85E-09	1.98E-10	1.43E-11	7.27E-13	9.90E-11	1.00E-10	1.98E-10	2.01E-11
64	Fluorene		2.85E-10	1.98E-11	1.43E-12	7.27E-14	9.90E-12	1.00E-11	1.98E-11	2.01E-11
65	Phenanthrene		1.11E-12	7.73E-14	5.57E-15	2.83E-16	3.85E-14	3.91E-14	7.71E-14	7.82E-14
66	Pyrene		5.70E-09	3.97E-10	2.86E-11	1.45E-12	1.98E-10	2.01E-10	3.96E-10	4.02E-10
67	Parathion		7.06E-13	4.91E-14	3.54E-15	1.80E-16	2.45E-14	2.49E-14	4.90E-14	4.97E-14
68	Pentachlorobenzene		3.50E-10	2.44E-11	1.76E-12	8.92E-14	1.22E-11	1.23E-11	2.43E-11	2.47E-11
69	Phenol		5.60E-12	3.90E-13	2.81E-14	1.43E-15	1.94E-13	1.97E-13	3.89E-13	3.95E-13
70	Pyridine		3.12E-08	2.17E-09	NA	NA	NA	NA	NA	NA
71	Quinoline		3.21E-10	2.23E-11	1.61E-12	8.19E-14	1.11E-11	1.13E-11	2.23E-11	2.26E-11
72	Tetrachlorobenzene		1.72E-10	1.20E-11	8.63E-13	4.39E-14	5.97E-12	6.06E-12	1.19E-11	1.21E-11
73	Tetrachloroethene		6.01E-12	4.18E-13	NA	NA	NA	NA	NA	NA
74	Toluene		9.58E-11	6.67E-12	NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		8.71E-11	6.06E-12	4.37E-13	2.22E-14	3.02E-12	3.07E-12	6.05E-12	6.14E-12
76	Trichloroethene		6.41E-11	4.46E-12	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		1.38E-06	9.60E-08	6.93E-09	3.52E-10	4.79E-08	4.86E-08	9.58E-08	9.72E-08
78	Vapona		2.79E-12	1.94E-13	1.40E-14	7.11E-16	9.69E-14	9.83E-14	1.94E-13	1.97E-13
79	Vinyl acetate		3.96E-11	2.76E-12	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		3.67E-11	2.55E-12	NA	NA	NA	NA	NA	IIA
81	Xylenes (total)		6.84E-12	4.76E-13	NA	NA	NA	NA	NA	NA
82										
83	INORGANICS									
84	Arsenic		4.24E-08	2.95E-09	2.13E-10	1.08E-11	1.47E-09	1.49E-09	2.94E-09	2.99E-09
85	Cadmium		3.10E-10	2.16E-11	1.56E-12	7.91E-14	1.08E-11	1.09E-11	2.15E-11	2.18E-11
86	Chromium (III)		1.26E-09	8.74E-11	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		4.42E-11	3.08E-12	NA	NA	NA	NA	NA	NA
88	Copper		3.17E-09	2.21E-10	NA	NA	NA	NA	NA	NA
89	Iron		9.68E-05	6.74E-06	NA	NA	NA	NA	NA	NA
90	Lead		1.63E-09	1.13E-10	8.18E-12	4.16E-13	5.66E-11	5.74E-11	1.13E-10	1.15E-10
91	Mercury		2.02E-09	1.41E-10	1.01E-11	5.15E-13	7.01E-11	7.12E-11	1.40E-10	1.42E-10
92	Selenium		5.21E-09	3.63E-10	NA	NA	NA	NA	NA	NA
93	Silver		3.24E-11	2.26E-12	NA	NA	NA	NA	NA	NA
94	Zinc		1.43E-08	9.95E-10	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 Yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
6.96E-02 INHALATION DFI
Deposition Factor DF
2.55E-04 DRY DDF
5.02E-03 DRY/NET TDF

CO = D*AT*1000

SD*BD
AC = ER * DFI
D = ER * x DF

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 20-Jun-91

A	B	C	M	N	O	P	Q	R
2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37
38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55
56	57	58	59	60				
61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78
79	80	81	82	83	84	85	86	87
88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105
106	107	108	109	110	111	112	113	114
115	116	117	118	119	120	121	122	123
124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141
142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176	177
178	179	180	181	182	183	184	185	186
187	188	189	190	191	192	193	194	195
196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213
214	215	216	217	218	219	220	221	222
223	224	225	226	227	228	229	230	231
232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249
250	251	252	253	254	255	256	257	258
259	260	261	262	263	264	265	266	267
268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285
286	287	288	289	290	291	292	293	294
295	296	297	298	299	300	301	302	303
304	305	306	307	308	309	310	311	312
313	314	315	316	317	318	319	320	321
322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339
340	341	342	343	344	345	346	347	348
349	350	351	352	353	354	355	356	357
358	359	360	361	362	363	364	365	366
367	368	369	370	371	372	373	374	375
376	377	378	379	380	381	382	383	384
385	386	387	388	389	390	391	392	393
394	395	396	397	398	399	400	401	402
403	404	405	406	407	408	409	410	411
412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429
430	431	432	433	434	435	436	437	438
439	440	441	442	443	444	445	446	447
448	449	450	451	452	453	454	455	456
457	458	459	460	461	462	463	464	465
466	467	468	469	470	471	472	473	474
475	476	477	478	479	480	481	482	483
484	485	486	487	488	489	490	491	492
493	494	495	496	497	498	499	500	501
502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519
520	521	522	523	524	525	526	527	528
529	530	531	532	533	534	535	536	537
538	539	540	541	542	543	544	545	546
547	548	549	550	551	552	553	554	555
556	557	558	559	560	561	562	563	564
565	566	567	568	569	570	571	572	573
574	575	576	577	578	579	580	581	582
583	584	585	586	587	588	589	590	591
592	593	594	595	596	597	598	599	600
601	602	603	604	605	606	607	608	609
610	611	612	613	614	615	616	617	618
619	620	621	622	623	624	625	626	627
628	629	630	631	632	633	634	635	636
637	638	639	640	641	642	643	644	645
646	647	648	649	650	651	652	653	654
655	656	657	658	659	660	661	662	663
664	665	666	667	668	669	670	671	672
673	674	675	676	677	678	679	680	681
682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699
700	701	702	703	704	705	706	707	708
709	710	711	712	713	714	715	716	717
718	719	720	721	722	723	724	725	726
727	728	729	730	731	732	733	734	735
736	737	738	739	740	741	742	743	744
745	746	747	748	749	750	751	752	753
754	755	756	757	758	759	760	761	762
763	764	765	766	767	768	769	770	771
772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789
790	791	792	793	794	795	796	797	798
799	800	801	802	803	804	805	806	807
808	809	810	811	812	813	814	815	816
817	818	819	820	821	822	823	824	825
826	827	828	829	830	831	832	833	834
835	836	837	838	839	840	841	842	843
844	845	846	847	848	849	850	851	852
853	854	855	856	857	858	859	860	861
862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879
880	881	882	883	884	885	886	887	888
889	890	891	892	893	894	895	896	897
898	899	900	901	902	903	904	905	906
907	908	909	910	911	912	913	914	915
916	917	918	919	920	921	922	923	924
925	926	927	928	929	930	931	932	933
934	935	936	937	938	939	940	941	942
943	944	945	946	947	948	949	950	951
952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969
970	971	972	973	974	975	976	977	978
979	980	981	982	983	984	985	986	987
988	989	990	991	992	993	994	995	996
997	998	999	1000	1001	1002	1003	1004	1005
1006	1007	1008	1009	1010	1011	1012	1013	1014
1015	1016	1017	1018	1019	1020	1021	1022	1023
1024	1025	1026	1027	1028	1029	1030	1031	1032
1033	1034	1035	1036	1037	1038	1039	1040	1041
1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059
1060	1061	1062	1063	1064	1065	1066	1067	1068
1069	1070	1071	1072	1073	1074	1075	1076	1077
1078	1079	1080	1081	1082	1083	1084	1085	1086
1087	1088	1089	1090	1091	1092	1093	1094	1095
1096	1097	1098	1099	1100	1101	1102	1103	1104
1105	1106	1107	1108	1109	1110	1111	1112	1113
1114	1115	1116	1117	1118	1119	1120	1121	1122
1123	1124	1125	1126	1127	1128	1129	1130	1131
1132	1133	1134	1135	1136	1137	1138	1139	1140
1141	1142	1143	1144	1145	1146	1147	1148	1149
1150	1151	1152	1153	1154	1155	1156	1157	1158
1159	1160	1161	1162	1163	1164	1165	1166	1167
1168	1169	1170	1171	1172	1173	1174	1175	1176
1177	1178	1179	1180	1181	1182	1183	1184	1185
1186	1187	1188	1189	1190	1191	1192	1193	1194
1195	1196	1197	1198	1199	1200	1201	1202	1203
1204	1205	1206	1207	1208	1209	1210	1211	1212
1213	1214	1215	1216	1217	1218	1219	1220	1221
1222	1223	1224	1225	1226	1227	1228	1229	1230
1231	1232	1233	1234	1235	1236	1237	1238	1239
1240	1241	1242	1243	1244	1245	1246	1247	1248
1249	1250	1251	1252	1253	1254	1255	1256	1257
1258	1259	1260	1261	1262	1263	1264	1265	1266
1267	1268	1269	1270	1271	1272	1273	1274	1275
1276	1277	1278	1279	1280	1281	1282	1283	1284
1285	1286	1287	1288	1289	1290	1291	1292	1293
1294	1295	1296	1297	1298	1299	1300	1301	1302
1303	1304	1305	1306	1307	1308	1309	1310	1311
1312	1313	1314	1315	1316	1317	1318	1319	1320
1321	1322	1323	1324	1325	1326	1327	1328	1329
1330	1331	1332	1333	1334	1335	1336	1337	1338
1339	1340	1341	1342	1343	1344	1345	1346	1347
1348	1349	1350	1351	1352	1353	1354	1355	1356
1357	1358	1359	1360	1361	1362	1363	1364	1365
1366	1367	1368	1369	1370	1371	1372	1373	1374
1375	1376	1377	1378	1379				

A	B	C	M	N	O	P	Q	R
			TABLE 1-B					
61	Chrysene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Fluorene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		3.35E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		1.05E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		1.68E-14	2.85E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		NA	NA	NA	NA	NA	NA
71	Quinoline		9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		NA	NA	NA	NA	NA	NA
74	Toluene		NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		NA	NA	NA	NA	NA	NA
80	Vinyl chloride		NA	NA	NA	NA	NA	NA
81	Xylenes (total)		NA	NA	NA	NA	NA	NA
82								
83	INORGANICS							
84	Arsenic		1.27E-10	2.14E-11	8.80E-10	8.93E-10	1.76E-09	1.79E-09
85	Cadmium		9.30E-13	1.57E-13	6.43E-12	6.53E-12	1.29E-11	1.31E-11
86	Chromium (III)		NA	NA	NA	NA	NA	NA
87	Chromium (VI)		NA	NA	NA	NA	NA	NA
88	Copper		NA	NA	NA	NA	NA	NA
89	Iron		NA	NA	NA	NA	NA	NA
90	Lead		4.89E-12	8.23E-13	3.38E-11	3.43E-11	6.77E-11	6.86E-11
91	Mercury		6.06E-12	1.02E-12	4.19E-11	4.25E-11	8.38E-11	8.51E-11
92	Selenium		NA	NA	NA	NA	NA	NA
93	Silver		NA	NA	NA	NA	NA	NA
94	Zinc		NA	NA	NA	NA	NA	NA

2.0 Yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/WET TDF

D*AT*1000

SD*BD
D = ER * X DF

TABLE 2

T U

ADULT TOTAL EXPOSURE - AVERAGE

A	B	C	T	U	V	W	X	Y	Z	AA
2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64	65	66	67
68	69	70	71	72	73	74	75	76	77	78
79	80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111
112	113	114	115	116	117	118	119	120	121	122
123	124	125	126	127	128	129	130	131	132	133
134	135	136	137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152	153	154	155
156	157	158	159	160	161	162	163	164	165	166
167	168	169	170	171	172	173	174	175	176	177
178	179	180	181	182	183	184	185	186	187	188
189	190	191	192	193	194	195	196	197	198	199
200	201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220	221
222	223	224	225	226	227	228	229	230	231	232
233	234	235	236	237	238	239	240	241	242	243
244	245	246	247	248	249	250	251	252	253	254
255	256	257	258	259	260	261	262	263	264	265
266	267	268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285	286	287
288	289	290	291	292	293	294	295	296	297	298
299	300	301	302	303	304	305	306	307	308	309
310	311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330	331
332	333	334	335	336	337	338	339	340	341	342
343	344	345	346	347	348	349	350	351	352	353
354	355	356	357	358	359	360	361	362	363	364
365	366	367	368	369	370	371	372	373	374	375
376	377	378	379	380	381	382	383	384	385	386
387	388	389	390	391	392	393	394	395	396	397
398	399	400	401	402	403	404	405	406	407	408
409	410	411	412	413	414	415	416	417	418	419
420	421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440	441
442	443	444	445	446	447	448	449	450	451	452
453	454	455	456	457	458	459	460	461	462	463
464	465	466	467	468	469	470	471	472	473	474
475	476	477	478	479	480	481	482	483	484	485
486	487	488	489	490	491	492	493	494	495	496

TABLE 2										
A	B	C	T	U	V	W	X	Y	Z	AA
61	Chrysene		5.67E-15	3.03E-16	3.85E-18	1.06E-18	2.83E-17	3.55E-19	1.04E-17	6.01E-15
62	Dibenzo(a,h)anthracene		5.67E-14	6.87E-16	1.28E-16	2.67E-17	2.83E-16	7.95E-17	1.04E-16	5.80E-14
63	Fluoranthene		5.67E-14	5.80E-15	1.72E-17	5.52E-18	2.83E-16	NA	1.04E-16	6.29E-14
64	Fluorene		5.67E-15	7.11E-16	6.32E-19	2.30E-19	2.83E-17	2.92E-20	1.04E-17	6.42E-15
65	Phenanthrene		2.21E-17	2.03E-18	3.05E-21	1.09E-21	1.10E-19	1.01E-19	4.05E-20	2.44E-17
66	Pyrene		1.13E-13	1.08E-14	3.27E-17	1.06E-17	5.66E-16	1.60E-18	2.08E-16	1.25E-13
67	Parathion		1.40E-17	1.45E-18	8.54E-22	3.23E-22	7.00E-20	3.17E-25	2.58E-20	1.56E-17
68	Pentachlorobenzene		6.96E-15	1.60E-15	1.77E-18	5.83E-19	3.47E-17	NA	1.28E-17	8.61E-15
69	Phenol		1.11E-16	1.56E-16	6.65E-22	2.60E-22	5.56E-19	NA	2.04E-19	2.68E-16
70	Pyridine		6.20E-13	NA	NA	NA	NA	NA	NA	6.20E-13
71	Quinoline		6.38E-15	2.92E-15	6.63E-20	2.59E-20	3.18E-17	6.35E-21	1.17E-17	9.34E-15
72	Tetrachlorobenzene		3.42E-15	1.83E-15	3.77E-19	1.38E-19	1.71E-17	NA	6.28E-18	5.28E-15
73	Tetrachloroethene		1.20E-16	NA	NA	NA	NA	NA	NA	1.20E-16
74	Toluene		1.91E-15	NA	NA	NA	NA	NA	NA	1.91E-15
75	Trichlorobenzene		1.73E-15	1.03E-16	1.26E-19	4.72E-20	8.64E-18	9.59E-21	3.18E-18	1.85E-15
76	Trichloroethene		1.27E-15	NA	NA	NA	NA	NA	NA	1.27E-15
77	Unsym. dimethyl hydrazine		2.74E-11	3.08E-09	3.84E-18	1.51E-18	1.37E-13	4.39E-20	5.04E-14	3.10E-09
78	Vapona		5.55E-17	2.71E-17	3.13E-22	1.22E-22	2.77E-19	2.12E-25	1.02E-19	8.29E-17
79	Vinyl acetate		7.87E-16	NA	NA	NA	NA	NA	NA	7.87E-16
80	Vinyl chloride		7.30E-15	NA	NA	NA	NA	NA	NA	7.30E-16
81	Xylenes (total)		1.36E-16	NA	NA	NA	NA	NA	NA	1.36E-16
82										
83	INORGANICS									
84	Arsenic		8.43E-13	1.24E-15	2.28E-15	2.99E-17	4.21E-15	4.89E-15	1.55E-16	8.56E-13
85	Cadmium		6.16E-15	1.03E-16	5.94E-18	2.60E-19	3.08E-17	NA	1.13E-18	6.31E-15
86	Chromium (III)		2.50E-14	NA	NA	NA	NA	NA	NA	2.50E-14
87	Chromium (VI)		8.79E-16	NA	NA	NA	NA	NA	NA	8.79E-16
88	Copper		6.30E-14	NA	NA	NA	NA	1.17E-15	NA	6.42E-14
89	Iron		1.92E-09	NA	NA	NA	NA	NA	NA	1.92E-09
90	Lead		3.24E-14	NA	NA	NA	NA	NA	NA	3.24E-14
91	Mercury		4.02E-14	9.48E-16	1.53E-17	1.14E-15	2.00E-16	NA	7.37E-18	4.25E-14
92	Selenium		1.04E-13	NA	NA	NA	NA	NA	NA	1.04E-13
93	Silver		6.44E-16	NA	NA	NA	NA	NA	NA	6.44E-16
94	Zinc		2.84E-13	NA	NA	NA	NA	2.59E-15	NA	2.87E-13
95										
96										
97										
98										
99										
100										

br 20 M3/day
 bw 70 Kg
 ef 365 days/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf
 D*AT*1000
 SD*BD
 AC = ER * DFI
 D = ER * X DF

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2	3		TABLE 3							
4	5	SENSITIVITY CASE	ADULT TOTAL EXPOSURE - MAXIMUM							
6	7									
8	9	18-Jun-91	INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
10	11	16:31:23	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	CONSUMPTION	EXPOSURE	(mg/Kg/day)
12	13	RES-B	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)
13	14	ORGANICS								
15	16	Acetone	2.51E-15	1.95E-11	2.42E-18	9.45E-19	1.15E-14	7.76E-21	4.22E-15	2.51E-15
17	18	Acetonitrile	2.27E-12	NA	NA	NA	NA	NA	NA	2.18E-11
19	20	Acrylonitrile	3.64E-13	NA	NA	NA	NA	NA	NA	9.64E-13
21	22	Aldrin	3.52E-18	6.76E-18	1.45E-18	1.64E-19	1.78E-20	2.81E-27	6.55E-21	1.19E-17
23	24	Aniline	1.27E-13	1.20E-13	4.65E-19	1.78E-19	6.45E-16	2.33E-19	2.37E-16	2.49E-13
25	26	Atrazine	7.87E-16	2.02E-16	2.16E-20	6.77E-21	3.99E-18	0.00E+00	1.47E-18	9.95E-16
27	28	Benzaldehyde	5.81E-14	2.74E-14	3.87E-19	1.44E-19	2.94E-16	2.51E-20	1.08E-16	8.59E-14
29	30	Benzene	7.30E-16	NA	NA	NA	NA	NA	NA	7.30E-16
31	32	Benzo(a)pyrene	2.82E-13	7.32E-14	7.66E-18	2.40E-18	1.43E-15	5.53E-19	5.26E-16	3.58E-13
33	34	Benzo(b)fluoranthene	2.84E-14	8.88E-15	2.90E-19	1.04E-19	1.44E-16	2.20E-20	5.29E-17	3.75E-14
35	36	Benzo(k)fluoranthene	6.20E-13	2.68E-13	4.50E-18	1.66E-18	3.14E-15	2.99E-19	1.16E-15	8.93E-13
37	38	Benzothiazole	2.64E-16	7.23E-17	3.16E-21	1.12E-21	1.34E-18	2.51E-24	4.92E-19	3.39E-16
39	40	Biphenyl	2.84E-13	NA	NA	NA	NA	NA	NA	2.84E-13
41	42	Bis(2-ethylhexyl)phthalate	1.56E-16	2.29E-16	1.37E-15	1.54E-16	7.90E-19	3.25E-24	2.91E-19	1.91E-15
43	44	Carbazole	1.27E-15	2.13E-16	8.58E-20	2.23E-20	6.45E-18	3.31E-21	2.37E-18	1.50E-15
45	46	Carbon Tetrachloride	3.70E-15	NA	NA	NA	NA	NA	NA	3.70E-15
47	48	4-Chloroaniline	7.30E-17	2.18E-17	7.12E-22	2.57E-22	3.69E-19	9.45E-22	1.36E-19	9.53E-17
49	50	Chlorobenzene	1.75E-16	NA	NA	NA	NA	NA	NA	1.75E-16
51	52	4-Chlorobiphenyl	1.80E-16	1.50E-17	2.63E-19	3.80E-20	9.10E-19	3.39E-22	3.35E-19	1.96E-16
53	54	4,4'-Dichlorobiphenyl	9.05E-18	6.17E-19	5.91E-20	7.45E-21	4.58E-20	5.71E-24	1.68E-20	9.79E-18
55	56	Chloroethane	6.44E-15	3.06E-15	4.34E-20	1.61E-20	3.26E-17	1.91E-23	1.20E-17	9.55E-15
57	58	Chloroform	3.14E-14	NA	NA	NA	NA	NA	NA	3.14E-14
59	60	Dibenzofuran	5.67E-15	6.29E-16	1.67E-18	3.13E-19	2.87E-17	2.19E-20	1.06E-17	6.34E-15
61	62	Dichlorobenzenes (total)	7.30E-16	NA	NA	NA	NA	NA	NA	7.30E-16
63	64	1,4-Dichlorobenzene	4.61E-17	NA	NA	NA	NA	NA	NA	4.61E-17
65	66	1,1-Dichloroethane	2.09E-15	NA	NA	NA	NA	NA	NA	2.09E-15
67	68	1,2-Dichloroethane	6.52E-16	9.41E-16	4.34E-21	1.61E-21	3.30E-18	5.73E-23	1.21E-18	1.60E-15
69	70	1,1-Dichloroethene	1.12E-15	NA	NA	NA	NA	NA	NA	1.12E-15
71	72	1,2-Dichloroethene	9.66E-16	NA	NA	NA	NA	NA	NA	9.66E-16
73	74	1,2-Dichloropropane	4.14E-16	NA	NA	NA	NA	NA	NA	4.14E-16
75	76	Dieldrin	6.46E-18	8.27E-17	1.71E-19	2.02E-20	3.27E-20	1.08E-24	1.20E-20	8.94E-17
77	78	Dimethyl sulfide	1.78E-15	NA	NA	NA	NA	NA	NA	1.78E-15
79	80	Hexachlorobenzene	1.71E-14	2.46E-15	8.73E-17	1.12E-17	8.65E-17	4.30E-19	3.18E-17	1.98E-14
81	82	Hydrazine	2.21E-11	5.61E-09	1.65E-18	6.49E-19	1.12E-13	3.52E-20	4.11E-14	5.63E-09
83	84	Lindane	3.00E-18	5.74E-19	2.05E-22	5.32E-23	1.52E-20	4.73E-26	5.59E-21	3.60E-18
85	86	Malathion	8.87E-18	1.03E-18	3.26E-22	9.64E-23	4.49E-20	0.00E+00	1.65E-20	9.96E-18
87	88	Methyl chloride	8.67E-16	NA	NA	NA	NA	NA	NA	8.67E-16
89	90	Methylene chloride	5.23E-14	NA	NA	NA	NA	NA	NA	5.23E-14
91	92	Methyl ethyl ketone	1.10E-15	4.54E-15	2.11E-21	8.18E-22	5.55E-18	0.00E+00	2.04E-18	5.65E-15
93	94	4-Methylphenol	9.94E-16	6.44E-16	1.10E-20	3.91E-21	5.03E-18	2.71E-23	1.85E-18	1.65E-15
95	96	Monomethyl hydrazine	6.96E-12	1.22E-09	5.22E-19	2.05E-19	3.52E-14	1.12E-23	1.30E-14	1.22E-09
97	98	Naphthalene	1.17E-16	2.61E-17	8.70E-21	2.21E-21	5.94E-19	1.48E-19	2.18E-19	1.44E-16
99	100	Naphthalene carbonitrile	6.20E-13	1.38E-13	4.60E-17	1.17E-17	3.14E-15	3.42E-18	1.16E-15	7.63E-13
101	102	n-Nitrosodimethylamine	7.08E-15	7.54E-13	5.43E-21	2.12E-21	3.58E-17	0.00E+00	1.32E-17	7.62E-13
103	104	PAHs								
105	106	Acenaphthalene	2.82E-14	6.70E-15	7.55E-18	1.44E-18	1.43E-16	1.05E-19	5.26E-17	3.51E-14
107	108	Acenaphthene	2.82E-14	3.44E-15	5.68E-18	1.15E-18	1.43E-16	4.07E-20	5.26E-17	3.19E-14
109	110	Benzo(a)pyrene	5.67E-14	1.68E-15	2.47E-15	2.89E-16	2.87E-16	1.40E-19	1.06E-16	6.15E-14

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
61	Chrysene		5.67E-15	4.36E-16	5.93E-17	7.28E-18	2.87E-17	3.55E-19	1.06E-17	6.21E-15
62	Dibenzo(a,h)anthracene		5.67E-14	1.98E-15	2.97E-15	3.45E-16	2.87E-16	7.95E-17	1.06E-16	6.24E-14
63	Fluoranthene		5.67E-14	7.17E-15	1.67E-16	2.23E-17	2.87E-17	NA	1.06E-16	6.44E-14
64	Fluorene		5.67E-15	8.50E-16	2.80E-18	4.75E-19	2.87E-17	2.92E-20	1.06E-17	6.56E-15
65	Phenanthrene		2.21E-17	2.56E-18	1.61E-20	2.56E-21	1.12E-19	1.01E-19	4.11E-20	2.49E-17
66	Pyrene		1.13E-13	1.36E-14	3.05E-16	4.12E-17	5.74E-16	1.60E-18	2.11E-16	1.28E-13
67	Parathion		1.40E-17	1.79E-18	2.30E-21	4.89E-22	7.11E-20	3.17E-25	2.61E-20	1.59E-17
68	Pentachlorobenzene		6.95E-15	1.78E-15	1.51E-17	2.08E-18	3.52E-17	NA	1.30E-17	8.81E-15
69	Phenol		1.11E-16	1.60E-16	7.26E-22	2.70E-22	5.64E-19	NA	2.07E-19	2.72E-16
70	Pyridine		6.20E-13	NA	NA	NA	NA	NA	NA	6.20E-13
71	Quinoline		6.38E-15	3.10E-15	7.82E-20	2.75E-20	3.23E-17	6.35E-21	1.19E-17	9.53E-15
72	Tetrachlorobenzene		3.42E-15	1.94E-15	1.65E-18	2.82E-19	1.73E-17	NA	6.37E-18	5.38E-15
73	Tetrachloroethene		1.20E-16	NA	NA	NA	NA	NA	NA	1.20E-16
74	Toluene		1.91E-15	1.44E-16	3.90E-19	7.72E-20	8.77E-18	9.59E-21	3.22E-18	1.91E-15
75	Trichlorobenzene		1.73E-15	NA	NA	NA	NA	NA	NA	1.89E-15
76	Trichloroethene		1.27E-15	NA	NA	NA	NA	NA	NA	1.27E-15
77	Unsym. dimethyl hydrazine		2.74E-11	3.12E-09	3.90E-18	1.53E-18	1.39E-13	4.39E-20	5.11E-14	3.15E-09
78	Vapona		5.53E-17	2.87E-17	3.59E-22	1.27E-22	2.81E-19	2.12E-25	1.03E-19	8.46E-17
79	Vinyl acetate		7.87E-16	NA	NA	NA	NA	NA	NA	7.87E-16
80	Vinyl chloride		7.30E-16	NA	NA	NA	NA	NA	NA	7.30E-16
81	Xylenes (total)		1.36E-16	NA	NA	NA	NA	NA	NA	1.36E-16
82										
83	INORGANICS									
84	Arsenic		8.43E-13	2.03E-14	1.22E-14	1.50E-16	4.27E-15	4.89E-15	1.57E-16	8.85E-13
85	Cadmium		6.16E-15	2.44E-16	1.80E-17	5.03E-19	3.12E-17	NA	1.15E-18	6.46E-15
86	Chromium (III)		2.50E-14	NA	NA	NA	NA	NA	NA	2.50E-14
87	Chromium (VI)		8.79E-16	NA	NA	NA	NA	1.17E-15	NA	8.79E-16
88	Copper		6.30E-14	NA	NA	NA	NA	NA	NA	6.42E-14
89	Iron		1.92E-09	NA	NA	NA	NA	NA	NA	1.92E-09
90	Lead		3.24E-14	NA	NA	NA	NA	NA	NA	3.24E-14
91	Mercury		4.02E-14	1.87E-15	5.07E-17	1.87E-15	2.03E-16	NA	7.48E-18	4.42E-14
92	Selenium		1.04E-13	NA	NA	NA	NA	NA	NA	1.04E-13
93	Silver		6.44E-16	NA	NA	NA	NA	NA	NA	6.44E-16
94	Zinc		2.84E-13	NA	NA	NA	NA	2.59E-15	NA	2.87E-13
95										
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103										

br 20 M3/day
 bw 70 Kg
 ef 365 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
3			CHILD TOTAL EXPOSURE - AVERAGE							
4										
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18-Jun-91
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RES-B

ORGANICS

Acetone	5.66E-15	3.42E-11	NA	1.37E-17	2.32E-18	1.02E-13	NA	1.75E-20	3.48E-14	5.66E-15
Acetonitrile	5.12E-12	NA	NA	NA	NA	1.02E-13	NA	NA	NA	3.95E-11
Acrylonitrile	2.18E-12	9.87E-18	2.76E-19	2.76E-19	1.79E-20	NA	NA	6.34E-27	NA	2.18E-12
Aldrin	7.95E-18	2.33E-13	2.56E-18	2.56E-18	4.33E-19	5.74E-15	5.74E-15	5.27E-19	5.40E-20	1.83E-17
Aniline	2.88E-13	3.07E-16	8.92E-20	8.92E-20	1.50E-20	3.55E-17	3.55E-17	0.00E+00	1.96E-15	5.28E-13
Atrazine	1.78E-15	5.10E-14	2.04E-18	2.04E-18	3.45E-19	2.62E-15	2.62E-15	5.67E-20	8.91E-16	2.13E-15
Benzaldehyde	1.31E-13	NA	NA	NA	NA	1.27E-14	1.27E-14	1.25E-18	NA	1.86E-13
Benzene	1.65E-15	1.11E-13	3.17E-17	3.17E-17	5.32E-18	1.28E-15	1.28E-15	4.96E-20	4.33E-15	1.65E-15
Benzofuran	6.38E-13	1.58E-14	1.46E-18	1.46E-18	2.47E-19	2.80E-14	2.80E-14	6.74E-19	4.36E-16	7.66E-13
Benzoic Acid	6.42E-14	4.95E-13	2.36E-17	2.36E-17	3.99E-18	1.19E-17	1.19E-17	5.67E-24	4.06E-18	8.17E-14
Benzonitrile	1.40E-12	1.26E-16	1.56E-20	1.56E-20	2.63E-21	7.03E-18	7.03E-18	7.34E-24	2.40E-18	1.93E-12
Benzothiazole	5.97E-16	3.32E-16	2.32E-16	2.32E-16	4.39E-20	5.74E-17	5.74E-17	7.46E-21	1.96E-17	7.39E-16
Biphenyl	6.42E-13	2.97E-16	2.64E-19	2.64E-19	NA	NA	NA	NA	NA	6.42E-13
Bis(2-ethylhexyl)phthalate	3.52E-16	3.61E-17	3.61E-17	3.61E-17	6.09E-22	3.29E-18	3.29E-18	2.13E-21	1.12E-18	9.38E-16
Carbazole	2.88E-15	NA	NA	NA	NA	NA	NA	NA	NA	3.25E-15
Carbon Tetrachloride	8.35E-15	1.65E-16	1.65E-16	1.65E-16	NA	NA	NA	NA	NA	8.35E-15
4-Chloroaniline	1.65E-16	3.95E-17	3.95E-17	3.95E-17	6.09E-22	3.29E-18	3.29E-18	2.13E-21	1.12E-18	2.09E-16
Chlorobenzene	3.96E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.96E-16
4-Chlorobiphenyl	4.06E-16	1.66E-17	2.11E-19	2.11E-19	3.10E-20	8.10E-18	8.10E-18	7.66E-22	2.76E-18	4.34E-16
4,4'-Chlorobiphenyl	2.04E-17	6.18E-19	2.60E-20	2.60E-20	3.28E-21	4.08E-19	4.08E-19	1.29E-23	1.39E-17	2.16E-17
Chloroethane	1.45E-14	5.66E-15	2.29E-19	2.29E-19	3.87E-20	2.90E-16	2.90E-16	4.32E-23	9.89E-17	2.06E-14
Chloroform	7.09E-14	7.76E-16	2.76E-18	2.76E-18	4.43E-19	2.55E-16	2.55E-16	4.94E-20	8.70E-17	7.09E-14
Dibenzofuran	1.28E-14	NA	NA	NA	NA	NA	NA	NA	NA	1.39E-14
Dichlorobenzenes (total)	1.65E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.65E-15
1,4-Dichlorobenzene	1.04E-16	NA	NA	NA	NA	NA	NA	NA	NA	1.04E-16
1,1-Dichloroethane	4.71E-15	NA	NA	NA	NA	NA	NA	NA	NA	4.71E-15
1,2-Dichloroethane	1.47E-15	1.51E-15	2.29E-20	2.29E-20	3.88E-21	2.94E-17	2.94E-17	1.29E-22	1.00E-17	3.02E-15
1,1-Dichloroethene	2.52E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.52E-15
1,2-Dichloroethene	2.18E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.18E-15
1,2-Dichloropropane	9.34E-16	NA	NA	NA	NA	NA	NA	NA	NA	9.34E-16
Dieldrin	1.46E-17	1.22E-16	4.94E-20	4.94E-20	5.02E-21	2.91E-19	2.91E-19	2.44E-24	9.92E-20	1.37E-16
Dimethyldisulfide	4.01E-15	NA	NA	NA	NA	NA	NA	NA	NA	4.01E-15
Hexachlorobenzene	3.86E-14	3.09E-15	4.20E-17	4.20E-17	5.47E-18	7.70E-16	7.70E-16	9.71E-19	2.62E-16	4.27E-14
Hydrazine	4.98E-11	1.04E-08	9.42E-18	9.42E-18	1.59E-18	9.95E-13	9.95E-13	7.96E-20	3.39E-13	1.04E-08
Lindane	6.78E-18	8.04E-19	6.29E-22	6.29E-22	1.05E-22	1.35E-19	1.35E-19	1.07E-25	4.61E-20	7.77E-18
Malathion	2.00E-17	1.52E-18	1.24E-21	1.24E-21	2.07E-22	4.00E-19	4.00E-19	0.00E+00	1.36E-19	2.21E-17
Methyl chloride	1.96E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.96E-15
Methylene chloride	1.18E-13	NA	NA	NA	NA	NA	NA	NA	NA	1.18E-13
Methyl ethyl ketone	2.47E-15	7.86E-15	1.18E-20	1.18E-20	2.00E-21	4.94E-17	4.94E-17	0.00E+00	1.68E-17	1.04E-14
4-Methylphenol	2.25E-15	1.03E-15	5.47E-20	5.47E-20	9.23E-21	4.48E-17	4.48E-17	6.13E-23	1.53E-17	3.34E-15
Monomethyl hydrazine	1.57E-11	2.45E-09	2.97E-18	2.97E-18	5.03E-19	3.14E-13	3.14E-13	2.52E-20	1.07E-13	2.47E-09
Naphthalene	2.65E-16	3.68E-17	2.58E-20	2.58E-20	4.29E-21	5.29E-18	5.29E-18	3.35E-19	1.80E-18	3.09E-16
Naphthalene carbonitrile	1.40E-12	1.94E-13	1.37E-16	1.37E-16	2.27E-17	2.80E-14	2.80E-14	7.72E-18	9.52E-15	1.63E-12
n-Nitrosodimethylamine	1.60E-14	1.14E-12	3.08E-20	3.08E-20	5.21E-21	3.19E-16	3.19E-16	0.00E+00	1.09E-16	1.16E-12
PAHs										
Acenaphthalene	6.38E-14	9.14E-15	1.30E-17	1.30E-17	2.10E-18	1.27E-15	1.27E-15	2.37E-19	4.33E-16	7.46E-14
Acenaphthene	6.38E-14	4.37E-15	1.11E-17	1.11E-17	1.81E-18	1.27E-15	1.27E-15	9.18E-20	4.33E-16	6.99E-14
Benzo(a)pyrene	1.28E-13	6.14E-16	6.38E-16	6.38E-16	5.94E-17	2.55E-15	2.55E-15	3.17E-19	8.70E-16	1.33E-13

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
61	Chrysene	TABLE 4	1.28E-14	4.59E-16	2.23E-17	2.63E-18	2.55E-16	8.01E-19	8.70E-17	1.36E-14
62	Dibenzo(a,h)anthracene		1.28E-13	1.06E-15	7.38E-16	6.66E-17	2.55E-15	1.79E-16	8.70E-16	1.33E-13
63	Fluoranthene		1.28E-13	8.78E-15	9.94E-17	1.38E-17	2.55E-15	NA	8.70E-16	1.40E-13
64	Fluorene		1.28E-14	1.09E-15	3.65E-18	5.74E-19	2.55E-16	6.60E-20	8.70E-17	1.42E-14
65	Phenanthrene		4.98E-17	3.12E-18	1.76E-20	2.71E-21	9.95E-19	2.27E-19	3.39E-17	5.45E-17
66	Pyrene		2.56E-13	1.64E-14	1.89E-16	2.64E-17	5.11E-15	3.62E-18	1.74E-15	2.79E-13
67	Parathion		3.17E-17	2.30E-18	4.93E-21	8.06E-22	6.33E-19	7.17E-25	2.15E-19	3.49E-17
68	Pentachlorobenzene		1.57E-14	2.41E-15	1.02E-17	1.45E-18	3.14E-16	NA	1.07E-16	1.86E-14
69	Phenol		2.51E-16	2.57E-16	3.84E-21	6.50E-22	5.02E-18	NA	1.71E-18	5.16E-16
70	Pyridine		1.40E-12	NA	NA	NA	NA	NA	1.40E-12	1.40E-12
71	Quinoline		1.44E-14	5.02E-15	3.83E-19	6.47E-20	2.88E-16	1.43E-20	9.80E-17	1.98E-14
72	Tetrachlorobenzene		7.72E-15	2.76E-15	2.18E-18	3.43E-19	1.54E-16	NA	5.25E-17	1.07E-14
73	Tetrachloroethene		2.70E-16	NA	NA	NA	NA	NA	NA	2.70E-16
74	Toluene		4.30E-15	NA	NA	NA	NA	NA	NA	4.30E-15
75	Trichlorobenzene		3.91E-15	1.68E-16	7.27E-19	1.18E-19	7.81E-17	2.17E-20	2.66E-17	4.18E-15
76	Trichloroethene		2.88E-15	NA	NA	NA	NA	NA	NA	2.88E-15
77	Unsym. dimethyl hydrazine		6.20E-11	5.68E-09	2.22E-17	3.75E-18	1.24E-12	9.92E-20	4.21E-13	5.74E-09
78	Vapona		1.25E-16	5.37E-17	1.81E-21	3.05E-22	2.50E-18	4.78E-25	8.52E-19	1.82E-16
79	Vinyl acetate		1.78E-15	NA	NA	NA	NA	NA	NA	1.78E-15
80	Vinyl chloride		1.69E-15	NA	NA	NA	NA	NA	NA	1.65E-15
81	Xylenes (total)		3.07E-16	NA	NA	NA	NA	NA	NA	3.07E-16
82										
83	INORGANICS									
84	Arsenic		1.90E-12	2.00E-15	1.32E-14	7.45E-17	3.80E-14	1.10E-14	1.29E-15	1.97E-12
85	Cadmium		1.39E-14	1.71E-16	3.43E-17	6.47E-19	2.78E-16	NA	9.46E-18	1.44E-14
86	Chromium (III)		5.64E-14	NA	NA	NA	NA	NA	NA	5.64E-14
87	Chromium (VI)		1.98E-15	NA	NA	NA	NA	NA	NA	1.98E-15
88	Copper		1.42E-13	NA	NA	NA	NA	2.64E-15	NA	1.45E-13
89	Iron		4.35E-09	NA	NA	NA	NA	NA	NA	4.35E-09
90	Lead		7.32E-14	NA	NA	NA	NA	NA	NA	7.32E-14
91	Mercury		9.07E-14	1.50E-15	8.81E-17	2.85E-15	1.81E-15	NA	6.17E-17	9.70E-14
92	Selenium		2.34E-13	NA	NA	NA	NA	NA	NA	2.34E-13
93	Silver		1.45E-15	NA	NA	NA	NA	NA	NA	1.45E-15
94	Zinc		6.42E-13	NA	NA	NA	NA	5.84E-15	NA	6.48E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2			TABLE 5							
3			CHILD TOTAL EXPOSURE - MAXIMUM							
4										
5			SENSITIVITY CASE							
6										
7										
8			18-Jun-91							
9			16:31:23							
10			RES-B							
11										
12			ORGANICS							
13			Acetone	5.66E-15	NA	NA	NA	NA	NA	5.66E-15
14			Acetonitrile	5.12E-12	3.48E-11	1.40E-17	1.04E-13	1.75E-20	3.53E-14	4.01E-11
15			Acrylonitrile	2.18E-12	NA	NA	NA	NA	NA	2.18E-12
16			Aldrin	7.95E-18	1.02E-17	8.37E-18	1.61E-19	6.34E-27	5.48E-20	2.71E-17
17			Aniline	2.88E-13	2.41E-13	2.69E-18	5.83E-15	5.27E-19	1.98E-15	5.37E-13
18			Atrazine	1.78E-15	3.44E-16	1.25E-19	3.60E-17	0.00E+00	1.23E-17	2.17E-15
19			Benzaldehyde	1.31E-13	5.42E-14	2.23E-18	2.65E-15	5.67E-20	9.04E-16	1.89E-13
20			Benzene	1.65E-15	NA	NA	NA	NA	NA	1.65E-15
21			Benzofuran	6.38E-13	1.24E-13	4.42E-17	1.29E-14	1.25E-18	4.40E-15	7.79E-13
22			Benzoic Acid	6.42E-14	1.72E-14	1.67E-18	1.50E-15	4.96E-20	4.43E-16	8.32E-14
23			Benzonitrile	5.28E-12	5.28E-13	2.60E-17	2.84E-14	6.74E-19	9.66E-15	1.97E-12
24			Benzothiazole	5.97E-16	1.39E-16	1.83E-20	1.21E-17	5.67E-24	4.12E-18	7.52E-16
25			Biphenyl	6.42E-13	NA	NA	NA	NA	NA	6.42E-13
26			Bis(2-ethylhexyl)phthalate	3.52E-16	3.44E-16	7.91E-15	7.14E-18	7.34E-24	2.43E-18	9.00E-15
27			Carbazole	2.88E-15	3.55E-16	4.96E-19	5.83E-17	7.46E-21	1.98E-17	3.31E-15
28			Carbon Tetrachloride	8.35E-15	NA	NA	NA	NA	NA	8.35E-15
29			4-Chloroaniline	1.65E-16	4.31E-17	4.11E-21	3.34E-18	2.13E-21	1.14E-18	2.12E-16
30			Chlorobenzene	3.96E-16	NA	NA	NA	NA	NA	3.96E-16
31			4-Chlorobiphenyl	4.06E-16	2.44E-17	1.52E-18	8.22E-18	7.66E-22	2.80E-18	4.43E-16
32			4,4'-Chlorobiphenyl	2.04E-17	1.01E-18	3.41E-19	4.14E-19	1.29E-23	1.41E-19	2.24E-17
33			Chloroethane	1.45E-14	6.01E-15	2.50E-19	2.95E-16	4.32E-23	1.00E-16	2.10E-14
34			Chloroform	7.09E-14	NA	NA	NA	NA	NA	7.09E-14
35			Dibenzofuran	1.28E-14	1.02E-15	9.63E-18	2.59E-16	4.94E-20	8.82E-17	1.42E-14
36			Dichlorobenzenes (total)	1.65E-15	NA	NA	NA	NA	NA	1.65E-15
37			1,4-Dichlorobenzene	1.04E-16	NA	NA	NA	NA	NA	1.04E-16
38			1,1-Dichloroethane	4.71E-15	NA	NA	NA	NA	NA	4.71E-15
39			1,2-Dichloroethane	1.47E-15	1.56E-15	2.51E-20	2.98E-17	1.29E-22	1.02E-17	3.07E-15
40			1,1-Dichloroethene	2.52E-15	NA	NA	NA	NA	NA	2.52E-15
41			1,2-Dichloroethene	2.18E-15	NA	NA	NA	NA	NA	2.18E-15
42			1,2-Dichloropropane	9.34E-16	NA	NA	NA	NA	NA	9.34E-16
43			Dieldrin	1.46E-17	1.24E-16	9.88E-19	2.95E-19	2.44E-24	1.01E-19	1.40E-16
44			Dimethyldisulfide	4.01E-15	NA	NA	NA	NA	NA	4.01E-15
45			Hexachlorobenzene	3.86E-14	3.85E-15	5.04E-16	7.81E-16	9.71E-19	2.66E-16	4.40E-14
46			Hydrazine	4.98E-11	1.05E-08	9.55E-18	1.01E-12	7.96E-20	3.44E-13	1.06E-08
47			Lindane	6.78E-18	9.41E-19	1.19E-21	1.37E-19	1.07E-25	4.68E-20	7.91E-18
48			Malathion	2.00E-17	1.91E-18	1.88E-21	4.05E-19	0.00E+00	1.38E-19	2.25E-17
49			Methyl chloride	1.96E-15	NA	NA	NA	NA	NA	1.96E-15
50			Methylene chloride	1.18E-13	NA	NA	NA	NA	NA	1.18E-13
51			Methyl ethyl ketone	2.47E-15	8.02E-15	1.22E-20	5.01E-17	0.00E+00	1.71E-17	1.06E-14
52			4-Methylphenol	2.25E-15	1.09E-15	6.34E-20	4.55E-17	6.13E-23	1.55E-17	3.40E-15
53			Monomethyl hydrazine	1.57E-11	2.49E-09	3.01E-18	3.18E-13	2.52E-20	1.08E-13	2.50E-09
54			Naphthalene	2.65E-16	4.22E-17	5.02E-20	5.36E-18	3.35E-19	1.83E-18	3.15E-16
55			Naphthalene carbonitrile	1.40E-12	2.23E-13	2.66E-16	2.84E-14	7.72E-18	9.66E-15	1.66E-12
56			n-Nitrosodimethylamine	1.60E-14	1.16E-12	3.13E-20	3.24E-16	0.00E+00	1.10E-16	1.17E-12
57			PAHs							
58			Acenaphthalene	6.38E-14	1.05E-14	4.36E-17	1.29E-15	2.37E-19	4.40E-16	7.60E-14
59			Acenaphthene	6.38E-14	5.62E-15	3.28E-17	1.29E-15	9.18E-20	4.40E-16	7.11E-14
60			Benzo(a)pyrene	1.28E-13	3.00E-15	1.43E-14	2.59E-15	3.17E-19	8.82E-16	1.49E-13

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
61		Chrysene	1.28E-14	7.04E-16	3.42E-16	1.81E-17	2.59E-16	8.01E-19	8.82E-17	1.42E-14
62		Dibenz(a,h)anthracene	1.28E-13	3.45E-15	1.72E-14	8.61E-16	2.59E-15	1.79E-16	8.82E-16	1.53E-13
63		Fluoranthene	1.28E-13	1.13E-14	9.62E-16	5.56E-17	2.59E-15	NA	8.82E-16	1.44E-13
64		Fluorene	1.28E-14	1.35E-15	1.61E-17	1.18E-18	2.59E-16	6.60E-20	8.82E-17	1.45E-14
65		Phenanthrene	4.98E-17	4.09E-18	9.29E-20	6.38E-21	1.01E-18	2.27E-19	3.44E-19	5.56E-17
66		Pyrene	2.56E-13	2.14E-14	1.76E-15	1.03E-16	5.18E-15	3.62E-18	1.76E-15	2.86E-13
67		Parathion	3.17E-17	2.93E-18	1.33E-20	1.22E-21	6.42E-19	7.17E-25	2.19E-19	3.55E-17
68		Pentachlorobenzene	1.57E-14	2.74E-15	8.69E-17	5.18E-18	3.18E-16	NA	1.08E-16	1.90E-14
69		Phenol	2.51E-16	2.66E-16	4.19E-21	6.73E-22	5.09E-18	NA	1.73E-18	5.24E-16
70		Pyridine	1.40E-12	NA	NA	NA	NA	NA	NA	1.40E-12
71		Quinoline	1.44E-14	5.37E-15	4.51E-19	6.86E-20	2.92E-16	1.43E-20	9.94E-17	2.02E-14
72		Tetrachlorobenzene	7.72E-15	2.94E-15	9.55E-18	7.03E-19	1.56E-16	NA	5.33E-17	1.09E-14
73		Tetrachloroethene	2.70E-16	NA	NA	NA	NA	NA	NA	2.70E-16
74		Toluene	4.30E-15	NA	NA	NA	NA	NA	NA	4.30E-15
75		Trichlorobenzene	3.91E-15	2.43E-16	2.25E-18	1.93E-19	7.92E-17	2.17E-20	2.70E-17	4.26E-15
76		Trichloroethene	2.88E-15	NA	NA	NA	NA	NA	NA	2.88E-15
77		Unsym. dimethyl hydrazine	6.20E-11	5.76E-09	2.25E-17	3.81E-18	1.25E-12	9.92E-20	4.27E-13	5.83E-09
78		Vapona	1.25E-16	5.68E-17	1.96E-21	3.16E-22	2.54E-18	4.78E-25	8.64E-19	1.86E-16
79		Vinyl acetate	1.78E-15	NA	NA	NA	NA	NA	NA	1.78E-15
80		Vinyl chloride	1.65E-15	NA	NA	NA	NA	NA	NA	1.65E-15
81		Xylenes (total)	3.07E-16	NA	NA	NA	NA	NA	NA	3.07E-16
82										
83		INORGANICS								
84		Arsenic	1.90E-12	3.74E-14	7.03E-14	3.73E-16	3.85E-14	1.10E-14	1.31E-15	2.06E-12
85		Cadmium	1.39E-14	4.32E-16	1.04E-16	1.25E-18	2.82E-16	NA	9.60E-18	1.47E-14
86		Chromium (III)	5.64E-14	NA	NA	NA	NA	NA	NA	5.64E-14
87		Chromium (VI)	1.98E-15	NA	NA	NA	NA	NA	NA	1.98E-15
88		Copper	1.42E-13	NA	NA	NA	NA	2.64E-15	NA	1.45E-13
89		Iron	4.35E-09	NA	NA	NA	NA	NA	NA	4.35E-09
90		Lead	7.32E-14	NA	NA	NA	NA	NA	NA	7.32E-14
91		Mercury	9.07E-14	3.20E-15	2.93E-16	4.66E-15	1.84E-15	NA	6.25E-17	1.01E-13
92		Selenium	2.34E-13	NA	NA	NA	NA	NA	NA	2.34E-13
93		Silver	1.45E-15	NA	NA	NA	NA	NA	NA	1.45E-15
94		Zinc	6.42E-13	NA	NA	NA	NA	5.84E-15	NA	6.48E-13

Inhalation dose = Cair*br/bw/ugmg

ROCKY MTN ARSENAL - RESIDENT SCENARIO B - HYDRAZINE WASTESTREAM 18-Jun-91

A	B	C	BH	BI	BJ
2			TABLE 6		
3			INFANT		
4			TOTAL		
5			EXPOSURE		
6					
7					
8					
9					
10					
11					
12	ORGANICS				
13	Acetone		3.70E-15	6.43E-17	3.77E-15
14	Acetonitrile		3.35E-12	7.93E-11	8.27E-11
15	Acrylonitrile		1.43E-12	4.40E-15	1.43E-12
16	Aldrin		5.20E-18	4.34E-17	4.86E-17
17	Aniline		1.88E-13	9.05E-13	1.09E-12
18	Atrazine		1.76E-15	3.62E-15	4.79E-15
19	Benzaldehyde		8.58E-14	3.13E-13	3.98E-13
20	Benzene		1.08E-15	1.25E-18	1.08E-15
21	Benzofuran		4.17E-13	1.30E-12	1.72E-12
22	Benzoic Acid		4.20E-14	1.37E-13	1.79E-13
23	Benzonitrile		9.17E-13	3.25E-12	4.17E-12
24	Benothiazole		3.91E-16	1.23E-15	1.62E-15
25	Biphenyl		4.20E-13	7.29E-15	4.28E-13
26	Bis(2-ethylhexyl)phthalate		2.31E-16	6.95E-15	7.18E-15
27	Carbazole		1.88E-15	5.45E-15	7.33E-15
28	Carbon Tetrachloride		5.47E-15	9.49E-17	5.56E-15
29	4-Chloroaniline		1.08E-16	3.47E-16	4.55E-16
30	Chlorobenzene		2.59E-16	4.50E-18	2.64E-16
31	4-Chlorobiphenyl		2.66E-16	7.14E-16	9.80E-16
32	4,4'-Chlorobiphenyl		1.34E-17	3.56E-17	4.90E-17
33	Chloroethane		9.52E-15	3.47E-14	4.43E-14
34	Chloroform		4.64E-14	8.06E-16	4.72E-14
35	Dibenzofuran		8.38E-15	2.31E-14	3.14E-14
36	Dichlorobenzenes (total)		1.08E-15	1.87E-17	1.10E-15
37	1,4-Dichlorobenzene		6.82E-17	1.18E-18	6.93E-17
38	1,1-Dichloroethane		3.09E-15	5.36E-17	3.14E-15
39	1,2-Dichloroethane		9.64E-16	5.81E-15	6.78E-15
40	1,1-Dichloroethene		1.65E-15	2.87E-17	1.68E-15
41	1,2-Dichloroethene		1.43E-15	2.48E-17	1.45E-15
42	1,2-Dichloropropane		6.11E-16	1.06E-17	6.22E-16
43	Dieldrin		9.55E-18	3.25E-16	3.35E-16
44	Dimethyldisulfide		2.62E-15	4.56E-17	2.67E-15
45	Hexachlorobenzene		2.52E-14	1.62E-14	4.15E-14
46	Hydrazine		3.26E-11	2.05E-08	2.05E-08
47	Lindane		4.44E-18	1.31E-17	1.75E-17
48	Malathion		1.31E-17	3.63E-17	4.94E-17
49	Methyl chloride		1.28E-15	2.22E-17	1.30E-15
50	Methylene chloride		7.73E-14	1.34E-15	7.86E-14
51	Methyl ethyl ketone		1.62E-15	2.05E-14	2.22E-14
52	4-Methylphenol		1.47E-15	5.99E-15	7.46E-15
53	Monomethyl hydrazine		1.03E-11	4.45E-09	4.46E-09
54	Naphthalene		1.73E-16	5.26E-16	6.99E-16
55	Naphthalene carbonitrile		9.17E-13	2.78E-12	3.69E-12
56	n-Nitrosodimethylamine		1.05E-14	2.77E-12	2.78E-12
57	PAHs				
58	Acenaphthalene		4.17E-14	1.28E-13	1.70E-13
59	Acenaphthene		4.17E-14	1.16E-13	1.58E-13
60	Benzo(a)pyrene		8.38E-14	2.24E-13	3.08E-13

18-Jun-91
16:31:23
RES-B

SENSITIVITY CASE

MAXIMUM
TOTAL
(mg/kg/day)

MAXIMUM
BREAST MILK
(mg/kg/day)

A	B	C	BH	BI	BJ
2			TABLE 6		
61	Chrysene		8.38E-15	2.26E-14	3.10E-14
62	Dibenzo(a,h)anthracene		8.38E-14	2.27E-13	3.11E-13
63	Fluoranthene		8.38E-14	2.34E-13	3.18E-13
64	Fluorene		8.38E-15	2.39E-14	3.22E-14
65	Phenanthrene		3.26E-17	9.06E-17	1.23E-16
66	Pyrene		1.68E-13	4.66E-13	6.34E-13
67	Parathion		2.07E-17	5.80E-17	7.87E-17
68	Pentachlorobenzene		1.03E-14	7.23E-15	1.75E-14
69	Phenol		1.65E-16	9.91E-16	1.16E-15
70	Pyridine		9.17E-13	1.59E-14	9.33E-13
71	Quinoline		9.43E-15	3.47E-14	4.41E-14
72	Tetrachlorobenzene		5.05E-15	4.42E-15	9.47E-15
73	Tetrachloroethene		1.77E-16	3.07E-18	1.80E-16
74	Toluene		2.82E-15	8.15E-18	2.82E-15
75	Trichlorobenzene		2.56E-15	1.55E-15	4.11E-15
76	Trichloroethene		1.88E-15	3.27E-17	1.92E-15
77	Unsym. dimethyl hydrazine		4.06E-11	1.15E-08	1.15E-08
78	Vapona		8.20E-17	3.08E-16	3.90E-16
79	Vinyl acetate		1.16E-15	2.02E-17	1.18E-15
80	Vinyl chloride		1.08E-15	1.87E-17	1.10E-15
81	Xylenes (total)		2.01E-16	1.16E-19	2.01E-16

82	INORGANICS				
84	Arsenic		1.25E-12	NE	1.25E-12
85	Cadmium		9.11E-15	NE	9.11E-15
86	Chromium (III)		3.69E-14	NE	3.69E-14
87	Chromium (VI)		1.30E-15	NE	1.30E-15
88	Copper		9.32E-14	NE	9.32E-14
89	Iron		2.84E-09	NE	2.84E-09
90	Lead		4.79E-14	NE	4.79E-14
91	Mercury		5.94E-14	NE	5.94E-14
92	Selenium		1.53E-13	NE	1.53E-13
93	Silver		9.52E-16	NE	9.52E-16
94	Zinc		4.20E-13	NE	4.20E-13

br 3.80E+00 M3/day
bw 9.00E+00 Kg
um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	D	E	F	G
			TABLE 28 CARCINOGENIC SLOPE FACTORS ((mg/kg-day) ⁻¹)			
			Inhalation Slope Factor	Oral Slope Factor	Dermal Slope Factor	
98	103 RES-B					
99	104 SENSITIVITY CASE					
100						
101						
102						
103						
104						
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		2.40E-01	5.40E-01	NC	
110	Aldrin		1.70E+01	1.70E+01	3.40E+01	
111	Aniline		5.70E-03	5.70E-03	1.14E-02	
112	Benzene		2.90E-02	2.90E-02	NC	
113	Bis(2-ethylhexyl)phthalate		1.40E-02	1.40E-02	2.80E-02	
114	Carbazole		2.00E-02	2.00E-02	4.00E-02	
115	Carbon Tetrachloride		1.30E-01	1.30E-01	NC	
116	Chloroform		8.10E-02	6.10E-03	NC	
117	1,4-Dichlorobenzene		2.40E-02	2.40E-02	NC	
118	1,1-Dichloroethane					
119	1,2-Dichloroethane		9.10E-02	9.10E-02	1.82E-01	
120	1,1-Dichloroethene		1.20E+00	6.00E-01	NC	
121	1,2-Dichloropropane		6.80E-02	6.80E-02	NC	
122	Dieldrin		1.60E+01	1.60E+01	3.20E+01	
123	Hexachlorobenzene		1.60E+00	1.60E+00	3.20E+00	
124	Hydrazine		1.71E+01	3.00E+00	6.00E+00	
125	Lindane		1.30E+00	1.30E+00	2.60E+00	
126	Methyl chloride		6.30E-03	1.30E-02	NC	
127	Methylene chloride		1.40E-02	7.50E-03	NC	
128	4-Methylphenol					
129	Monomethyl hydrazine		1.10E+00	1.10E+00	2.20E+00	
130	n-Nitrosodimethylamine		5.10E+01	5.10E+01	1.02E+02	
131	PAHs					
132	Benzo(a)pyrene		6.10E+00	1.15E+01	2.30E+01	
133	Chrysene		6.10E+00	1.15E+01	2.30E+01	
134	Dibenzo(a,h)anthracene		6.10E+00	1.15E+01	2.30E+01	
135	Parathion					
136	Quinoline		1.20E+01	1.20E+01	2.40E+01	
137	Tetrachloroethene		3.30E-03	5.10E-02	NC	
138	Trichloroethene		1.10E-02	1.10E-02	NC	
139	Vapona		2.90E-01	2.90E-01	5.80E-01	
140	Vinyl chloride		2.95E-01	2.30E+00	NC	
141						
142	INORGANICS					
143	Arsenic		1.50E+01	1.75E+00	3.50E+01	
144	Cadmium		6.10E+00	NC	NC	
145	Chromium (VI)		4.10E+01	NC	NC	
146						
147	Total					
148						
149						
150						
151						
152						
153						

AED Adult Exposure Duration 64
 CED Child Exposure Duration 5
 CID Child Inhalation Duration 1
 IED Infant Exposure Duration 1
 IID Infant Inhalation Duration 1

A	B	C	I	J	K	L	M	N	O
98	99	100	101	102	103	104	105	106	107
108	109	110	111	112	113	114	115	116	117
118	119	120	121	122	123	124	125	126	127
128	129	130	131	132	133	134	135	136	137
138	139	140	141	142	143	144	145	146	147
148	149	150	151	152	153	154	155	156	157
158	159	160	161	162	163	164	165	166	167
168	169	170	171	172	173	174	175	176	177
178	179	180	181	182	183	184	185	186	187
188	189	190	191	192	193	194	195	196	197
198	199	200	201	202	203	204	205	206	207
208	209	210	211	212	213	214	215	216	217
218	219	220	221	222	223	224	225	226	227
228	229	230	231	232	233	234	235	236	237
238	239	240	241	242	243	244	245	246	247
248	249	250	251	252	253	254	255	256	257
258	259	260	261	262	263	264	265	266	267
268	269	270	271	272	273	274	275	276	277
278	279	280	281	282	283	284	285	286	287
288	289	290	291	292	293	294	295	296	297
298	299	300	301	302	303	304	305	306	307
308	309	310	311	312	313	314	315	316	317
318	319	320	321	322	323	324	325	326	327
328	329	330	331	332	333	334	335	336	337
338	339	340	341	342	343	344	345	346	347
348	349	350	351	352	353	354	355	356	357
358	359	360	361	362	363	364	365	366	367
368	369	370	371	372	373	374	375	376	377
378	379	380	381	382	383	384	385	386	387
388	389	390	391	392	393	394	395	396	397
398	399	400	401	402	403	404	405	406	407
408	409	410	411	412	413	414	415	416	417
418	419	420	421	422	423	424	425	426	427
428	429	430	431	432	433	434	435	436	437
438	439	440	441	442	443	444	445	446	447
448	449	450	451	452	453	454	455	456	457
458	459	460	461	462	463	464	465	466	467
468	469	470	471	472	473	474	475	476	477
478	479	480	481	482	483	484	485	486	487
488	489	490	491	492	493	494	495	496	497
498	499	500	501	502	503	504	505	506	507
508	509	510	511	512	513	514	515	516	517
518	519	520	521	522	523	524	525	526	527
528	529	530	531	532	533	534	535	536	537
538	539	540	541	542	543	544	545	546	547
548	549	550	551	552	553	554	555	556	557
558	559	560	561	562	563	564	565	566	567
568	569	570	571	572	573	574	575	576	577
578	579	580	581	582	583	584	585	586	587
588	589	590	591	592	593	594	595	596	597
598	599	600	601	602	603	604	605	606	607
608	609	610	611	612	613	614	615	616	617
618	619	620	621	622	623	624	625	626	627
628	629	630	631	632	633	634	635	636	637
638	639	640	641	642	643	644	645	646	647
648	649	650	651	652	653	654	655	656	657
658	659	660	661	662	663	664	665	666	667
668	669	670	671	672	673	674	675	676	677
678	679	680	681	682	683	684	685	686	687
688	689	690	691	692	693	694	695	696	697
698	699	700	701	702	703	704	705	706	707
708	709	710	711	712	713	714	715	716	717
718	719	720	721	722	723	724	725	726	727
728	729	730	731	732	733	734	735	736	737
738	739	740	741	742	743	744	745	746	747
748	749	750	751	752	753	754	755	756	757
758	759	760	761	762	763	764	765	766	767
768	769	770	771	772	773	774	775	776	777
778	779	780	781	782	783	784	785	786	787
788	789	790	791	792	793	794	795	796	797
798	799	800	801	802	803	804	805	806	807
808	809	810	811	812	813	814	815	816	817
818	819	820	821	822	823	824	825	826	827
828	829	830	831	832	833	834	835	836	837
838	839	840	841	842	843	844	845	846	847
848	849	850	851	852	853	854	855	856	857
858	859	860	861	862	863	864	865	866	867
868	869	870	871	872	873	874	875	876	877
878	879	880	881	882	883	884	885	886	887
888	889	890	891	892	893	894	895	896	897
898	899	900	901	902	903	904	905	906	907
908	909	910	911	912	913	914	915	916	917
918	919	920	921	922	923	924	925	926	927
928	929	930	931	932	933	934	935	936	937
938	939	940	941	942	943	944	945	946	947
948	949	950	951	952	953	954	955	956	957
958	959	960	961	962	963	964	965	966	967
968	969	970	971	972	973	974	975	976	977
978	979	980	981	982	983	984	985	986	987
988	989	990	991	992	993	994	995	996	997
998	999	1000	1001	1002	1003	1004	1005	1006	1007
1008	1009	1010	1011	1012	1013	1014	1015	1016	1017
1018	1019	1020	1021	1022	1023	1024	1025	1026	1027
1028	1029	1030	1031	1032	1033	1034	1035	1036	1037
1038	1039	1040	1041	1042	1043	1044	1045	1046	1047
1048	1049	1050	1051	1052	1053	1054	1055	1056	1057
1058	1059	1060	1061	1062	1063	1064	1065	1066	1067
1068	1069	1070	1071	1072	1073	1074	1075	1076	1077
1078	1079	1080	1081	1082	1083	1084	1085	1086	1087
1088	1089	1090	1091	1092	1093	1094	1095	1096	1097
1098	1099	1100	1101	1102	1103	1104	1105	1106	1107
1108	1109	1110	1111	1112	1113	1114	1115	1116	1117
1118	1119	1120	1121	1122	1123	1124	1125	1126	1127
1128	1129	1130	1131	1132	1133	1134	1135	1136	1137
1138	1139	1140	1141	1142	1143	1144	1145	1146	1147
1148	1149	1150	1151	1152	1153	1154	1155	1156	1157
1158	1159	1160	1161	1162	1163	1164	1165	1166	1167
1168	1169	1170	1171	1172	1173	1174	1175	1176	1177
1178	1179	1180	1181	1182	1183	1184	1185	1186	1187
1188	1189	1190	1191	1192	1193	1194	1195	1196	1197
1198	1199	1200	1201	1202	1203	1204	1205	1206	1207
1208	1209	1210	1211	1212	1213	1214	1215	1216	1217
1218	1219	1220	1221	1222	1223	1224	1225	1226	1227
1228	1229	1230	1231	1232	1233	1234	1235	1236	1237
1238	1239	1240	1241	1242	1243	1244	1245	1246	1247
1248	1249	1250	1251	1252	1253	1254	1255	1256	1257
1258	1259	1260	1261	1262	1263	1264	1265	1266	1267
1268	1269	1270	1271	1272	1273	1274	1275	1276	1277
1278	1279	1280	1281	1282	1283	1284	1285	1286	1287
1288	1289	1290	1291	1292	1293	1294	1295	1296	1297
1298	1299	1300	1301	1302	1303	1304	1305	1306	1307
1308	1309	1310	1311	1312	1313	1314	1315	1316	1317
1318	1319	1320	1321	1322	1323	1324	1325	1326	1327
1328	1329	1330	1331	1332	1333	1334	1335	1336	1337
1338	1339	1340	1341	1342	1343	1344	1345	1346	1347
1348	1349	1350	1351	1352	1353	1354	1355	1356	1357
1358	1359	1360	1361	1362	1363	1364	1365	1366	1367
1368	1369	1370	1371	1372	1373	1374	1375	1376	1377
1378	1379	1380	1381	1382	1383	1384	1385	1386	1387
1388	1389	1390	1391	1392	1393	1394	1395	1396	1397
1398	1399	1400	1401	1402	1403	1404	1405	1406	1407
1408	1409	1410	1411	1412	1413	1414	1415	1416	1417
1418	1419	1420	1421	1422	1423	1424	1425	1426	1427
1428	1429	1430	1431	1432	1433	1434	1435	1436	1437
1438	1439	1440	1441	1442	1443	1444	1445	1446	1447
1448	1449	1450	1451	1452	1453	1454	1455	1456	1457
1458	1459	1460	1461	1462	1463	1464	1465	1466	

A	B	C	Q	R	S	T	U	V	W	X
98	RES-B		TABLE 30							
99	SENSITIVITY CASE		CHILD CARCINOGENIC RISK							
100										
101										
102										
103										
104										
105										
106										
107										
108	ORGANICS									
109	Acrylonitrile		7.47E-15	NA	NA	NA	NA	NA	NA	7.47E-15
110	Aldrin		1.93E-18	1.20E-17	3.35E-19	2.18E-20	1.93E-19	7.70E-27	1.31E-19	1.46E-17
111	Aniline		2.34E-17	9.47E-17	1.04E-21	1.76E-22	2.34E-18	2.15E-22	1.59E-18	1.22E-16
112	Benzene		6.83E-19	NA	NA	NA	NA	NA	NA	6.83E-19
113	Bis(2-ethylhexyl)phthalate		7.05E-20	3.32E-19	2.32E-19	1.20E-20	7.03E-21	7.34E-27	4.79E-21	6.58E-19
114	Carbazole		8.22E-19	4.24E-19	3.77E-22	6.28E-23	8.21E-20	1.07E-23	5.59E-20	1.39E-18
115	Carbon Tetrachloride		1.55E-17	NA	NA	NA	NA	NA	NA	1.55E-17
116	Chloroform		8.21E-17	NA	NA	NA	NA	NA	NA	8.21E-17
117	1,4-Dichlorobenzene		3.57E-20	NA	NA	NA	NA	NA	NA	3.57E-20
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		1.91E-18	9.79E-18	1.49E-22	2.52E-23	1.91E-19	8.40E-25	1.30E-19	1.20E-17
120	1,1-Dichloroethene		4.33E-17	NA	NA	NA	NA	NA	NA	4.33E-17
121	1,2-Dichloropropane		9.07E-19	NA	NA	NA	NA	NA	NA	9.07E-19
122	Dieldrin		3.34E-18	1.39E-16	5.64E-20	5.74E-21	3.33E-19	2.78E-24	2.27E-19	1.43E-16
123	Hexachlorobenzene		8.82E-16	3.53E-16	4.80E-18	6.25E-19	8.80E-17	1.11E-19	5.99E-17	1.39E-15
124	Hydrazine		1.22E-11	2.02E-09	2.02E-18	3.42E-19	2.13E-13	1.70E-20	1.45E-13	2.23E-09
125	Lindane		1.26E-19	7.46E-20	5.84E-23	9.71E-24	1.26E-20	9.91E-27	8.56E-21	2.22E-19
126	Methyl chloride		1.76E-19	NA	NA	NA	NA	NA	NA	1.76E-19
127	Methylene chloride		2.36E-17	NA	NA	NA	NA	NA	NA	2.36E-17
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		2.47E-13	1.93E-10	2.33E-19	3.95E-20	2.46E-14	1.98E-21	1.68E-14	1.93E-10
130	n-Nitrosodimethylamine		1.16E-14	4.16E-12	1.12E-19	1.90E-20	1.16E-15	0.00E+00	7.92E-16	4.17E-12
131	PAHs									
132	Benzo(a)pyrene		1.12E-14	5.05E-16	5.24E-16	4.88E-17	2.10E-15	2.60E-19	1.43E-15	1.58E-14
133	Chrysene		1.12E-15	3.77E-16	1.83E-17	2.16E-18	2.10E-16	6.58E-19	1.43E-16	1.87E-15
134	Dibenzo(a,h)anthracene		1.12E-14	8.69E-16	6.06E-16	5.47E-17	2.10E-15	1.47E-16	1.43E-15	1.64E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		2.47E-15	4.31E-15	3.28E-19	5.54E-20	2.47E-16	1.23E-20	1.68E-16	7.19E-15
137	Tetrachloroethene		1.27E-20	NA	NA	NA	NA	NA	NA	1.27E-20
138	Trichloroethene		4.52E-19	NA	NA	NA	NA	NA	NA	4.52E-19
139	Vapona		5.19E-19	1.11E-18	3.74E-23	6.33E-24	5.18E-20	9.89E-27	3.53E-20	1.72E-18
140	Vinyl chloride		6.94E-18	NA	NA	NA	NA	NA	NA	6.94E-18
141										
142	INORGANICS									
143	Arsenic		4.08E-13	2.50E-16	1.65E-15	9.31E-18	4.75E-15	1.38E-15	3.24E-15	4.19E-13
144	Cadmium		1.21E-15	NA	NA	NA	NA	NA	NA	1.21E-15
145	Chromium (VI)		1.16E-15	NA	NA	NA	NA	NA	NA	1.16E-15
146										
147	Total		1.29E-11	2.42E-09	2.80E-15	1.16E-16	2.48E-13	1.53E-15	1.69E-13	2.43E-09

A	B	C	Z	AA	AB
98			TABLE 31		
99			INFANT CARCINOGENIC RISK		
100					
101					
102					
103	RES-B				
104	SENSITIVITY CASE				
105					
106					
107					
108	ORGANICS				
109	Acrylonitrile		4.89E-15	3.39E-17	4.92E-15
110	Aldrin		1.26E-18	1.05E-17	1.18E-17
111	Aniline		1.53E-17	7.37E-17	8.90E-17
112	Benzene		4.47E-19	5.17E-22	4.47E-19
113	Bis(2-ethylhexyl)phthalate		4.61E-20	1.39E-18	1.44E-18
114	Carbazole		5.38E-19	1.56E-18	2.09E-18
115	Carbon Tetrachloride		1.02E-17	1.76E-19	1.03E-17
116	Chloroform		5.37E-17	7.02E-20	5.38E-17
117	1,4-Dichlorobenzene		2.34E-20	4.06E-22	2.38E-20
118	1,1-Dichloroethane		NE	NE	NE
119	1,2-Dichloroethane		1.25E-18	7.56E-18	8.81E-18
120	1,1-Dichloroethene		2.83E-17	2.46E-19	2.86E-17
121	1,2-Dichloropropane		5.94E-19	1.03E-20	6.04E-19
122	Dieldrin		2.18E-18	7.44E-17	7.66E-17
123	Hexachlorobenzene		5.77E-16	3.71E-16	9.48E-16
124	Hydrazine		7.97E-12	8.78E-10	8.86E-10
125	Lindane		8.24E-20	2.43E-19	3.26E-19
126	Methyl chloride		1.15E-19	4.13E-21	1.19E-19
127	Methylene chloride		1.55E-17	1.44E-19	1.56E-17
128	4-Methylphenol		NE	NE	NE
129	Monomethyl hydrazine		1.62E-13	6.99E-11	7.01E-11
130	n-Nitrosodimethylamine		7.62E-15	2.02E-12	2.03E-12
131	PAHS				
132	Benzo(a)pyrene		7.30E-15	3.68E-14	4.41E-14
133	Chrysene		7.30E-16	3.71E-15	4.44E-15
134	Dibenzo(a,h)anthracene		7.30E-15	3.73E-14	4.46E-14
135	Parathion		NE	NE	NE
136	Quinoline		1.62E-15	5.95E-15	7.56E-15
137	Tetrachloroethene		8.33E-21	2.23E-21	1.06E-20
138	Trichloroethene		2.96E-19	5.14E-21	3.01E-19
139	Vapona		3.40E-19	1.27E-18	1.61E-18
140	Vinyl chloride		4.55E-18	6.15E-19	5.16E-18
141					
142	INORGANICS				
143	Arsenic		2.67E-13	NA	2.67E-13
144	Cadmium		7.94E-16	NA	7.94E-16
145	Chromium (VI)		7.61E-16	NA	7.61E-16
146					
147	Total		8.43E-12	9.50E-10	9.59E-10

TABLE 32
TOTAL LIFETIME CARCINOGENIC RISK

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
			INHALATION CARC. RISK	BREAST MILK INGESTION CARC. RISK	VEGETABLE INGESTION CARC. RISK	MILK INGESTION CARC. RISK	BEEF INGESTION CARC. RISK	SOIL/DUST INGESTION CARC. RISK	FISH INGESTION CARC. RISK	DERMAL EXPOSURE CARC. RISK	TOTAL LIFETIME CARC. RISK
98	RES-B										
99	SENSITIVITY CASE										
100											
101											
102											
103											
104											
105											
106											
107											
108	ORGANICS										
109	Acrylonitrile		1.24E-14	3.39E-17	NA	1.08E-18	NA	NA	NA	NA	1.24E-14
110	Aldrin		3.19E-18	1.05E-17	1.14E-16	1.08E-21	1.34E-19	4.66E-19	5.13E-26	3.32E-19	1.30E-16
111	Aniline		3.88E-17	7.37E-17	6.98E-16	3.35E-21	1.08E-21	5.65E-18	1.43E-21	4.03E-18	8.20E-16
112	Benzene		1.13E-18	5.17E-22	NA	NA	NA	NA	NA	NA	1.13E-18
113	Bis(2-ethylhexyl)phthalate		1.17E-19	1.39E-18	3.17E-18	7.46E-19	7.33E-20	1.70E-20	4.89E-26	1.21E-20	5.53E-18
114	Carbazole		1.56E-18	1.56E-18	3.75E-18	1.21E-21	3.85E-22	1.98E-19	7.11E-23	1.41E-19	7.01E-18
115	Carbon Tetrachloride		2.57E-17	1.76E-19	NA	NA	NA	NA	NA	NA	2.58E-17
116	Chloroform		1.36E-16	7.02E-20	NA	NA	NA	NA	NA	NA	1.36E-16
117	1,4-Dichlorobenzene		5.91E-20	4.06E-22	NA	NA	NA	NA	NA	NA	5.95E-20
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		3.17E-18	7.56E-18	8.57E-17	4.80E-22	1.55E-22	4.62E-19	5.60E-24	3.29E-19	9.73E-17
120	1,1-Dichloroethene		7.16E-17	2.46E-19	NA	NA	NA	NA	NA	NA	7.18E-17
121	1,2-Dichloropropane		1.50E-17	1.03E-20	NA	NA	NA	NA	NA	NA	1.51E-18
122	Dieldrin		5.52E-18	7.44E-17	1.33E-15	1.81E-19	3.52E-20	8.05E-19	1.86E-23	5.74E-19	1.41E-15
123	Hexachlorobenzene		1.46E-15	3.71E-16	3.35E-15	1.54E-17	3.83E-18	2.13E-16	7.40E-19	1.52E-16	5.56E-15
124	Hydrazine		2.01E-11	8.78E-10	1.74E-08	6.49E-18	2.10E-18	5.15E-13	1.14E-19	3.67E-13	1.83E-08
125	Lindane		2.08E-19	2.43E-19	6.67E-19	1.88E-22	5.95E-23	3.04E-20	6.61E-26	2.17E-20	1.17E-18
126	Methyl chloride		2.92E-19	4.13E-21	NA	NA	NA	NA	NA	NA	2.96E-19
127	Methylene chloride		3.91E-17	1.44E-19	NA	NA	NA	NA	NA	NA	3.92E-17
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		4.09E-13	6.99E-11	1.40E-09	7.50E-19	2.42E-19	5.96E-14	1.32E-20	4.25E-14	1.47E-09
130	n-Nitrosodimethylamine		1.93E-14	2.02E-12	3.88E-11	3.61E-19	1.16E-19	2.81E-15	0.00E+00	2.00E-15	4.09E-11
131	PAHS										
132	Benzo(a)pyrene		1.85E-14	3.68E-14	4.61E-15	1.69E-15	2.99E-16	5.07E-15	1.73E-18	3.62E-15	7.05E-14
133	Chrysene		1.85E-15	3.71E-15	3.57E-15	5.88E-17	1.33E-17	5.07E-16	4.39E-18	3.62E-16	1.01E-14
134	Dibenzo(a,h)anthracene		1.85E-14	3.73E-14	8.10E-15	1.95E-15	3.35E-16	5.07E-15	9.83E-16	3.62E-15	7.58E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		4.09E-15	5.95E-15	3.63E-14	1.06E-18	3.40E-19	5.96E-16	8.19E-20	4.25E-16	4.74E-14
137	Tetrachloroethene		2.10E-20	2.23E-21	NA	NA	NA	NA	NA	NA	2.33E-20
138	Trichloroethene		7.48E-19	5.14E-21	NA	NA	NA	NA	NA	NA	7.53E-19
139	Vapona		8.59E-19	1.27E-18	8.29E-18	1.20E-22	3.88E-23	1.25E-19	6.60E-26	8.93E-20	1.06E-17
140	Vinyl chloride		1.15E-17	6.15E-19	NA	NA	NA	NA	NA	NA	1.21E-17
141											
142	INORGANICS										
143	Arsenic		6.75E-13	NA	2.23E-15	5.29E-15	5.71E-17	1.15E-14	9.20E-15	8.19E-15	7.11E-13
144	Cadmium		2.01E-15	NA	NA	NA	NA	NA	NA	NA	2.01E-15
145	Chromium (VI)		1.92E-15	NA	NA	NA	NA	NA	NA	NA	1.92E-15
146											
147	Total		2.13E-11	9.50E-10	1.88E-08	9.01E-15	7.12E-16	6.01E-13	1.02E-14	4.28E-13	1.98E-08

A	B	C	AN	AO	AP	AQ
98			TABLE 33			
99			TOTAL LIFETIME	TOTAL LIFETIME	TOTAL LIFETIME	TOTAL LIFETIME
100			CARC. RISK	CARC. RISK	CARC. RISK	CARC. RISK
101						
102						
103	RES-B					
104	SENSITIVITY CASE					
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		1.24E-14	3.39E-17	NA	1.24E-14
110	Aldrin		3.19E-18	1.27E-16	3.32E-19	1.30E-16
111	Aniline		3.88E-17	7.77E-16	4.03E-18	8.20E-16
112	Benzene		1.13E-18	5.17E-22	NA	1.13E-18
113	Bis(2-ethylhexyl)phthalate		1.17E-19	5.40E-18	1.21E-20	5.53E-18
114	Carbazole		1.36E-18	5.51E-18	1.41E-19	7.01E-18
115	Carbon Tetrachloride		2.57E-17	1.76E-19	NA	2.58E-17
116	Chloroform		1.36E-16	7.02E-20	NA	1.36E-16
117	1,4-Dichlorobenzene		5.91E-20	4.06E-22	NA	5.95E-20
118	1,1-Dichloroethane		NE	NE	NE	NE
119	1,2-Dichloroethane		3.17E-18	9.38E-17	3.29E-19	9.73E-17
120	1,1-Dichloroethene		7.16E-17	2.46E-19	NA	7.18E-17
121	1,2-Dichloropropane		1.50E-18	1.03E-20	NA	1.51E-18
122	Dieldrin		5.52E-18	1.41E-15	5.74E-19	1.41E-15
123	Hexachlorobenzene		1.46E-15	3.95E-15	1.52E-16	5.56E-15
124	Hydrazine		2.01E-11	1.83E-08	3.67E-13	1.83E-08
125	Lindane		2.08E-19	9.41E-19	2.17E-20	1.17E-18
126	Methyl chloride		2.92E-19	4.13E-21	NA	2.96E-19
127	Methylene chloride		3.91E-17	1.44E-19	NA	3.92E-17
128	4-Methylphenol		NE	NE	NE	NE
129	Monomethyl hydrazine		4.09E-13	1.47E-09	4.25E-14	1.47E-09
130	n-Nitrosodimethylamine		1.93E-14	4.08E-11	2.00E-15	4.09E-11
131	PAHs					
132	Benzo(a)pyrene		1.85E-14	4.84E-14	3.62E-15	7.05E-14
133	Chrysene		1.85E-15	7.86E-15	3.62E-16	1.01E-14
134	Dibenzo(a,h)anthracene		1.85E-14	5.38E-14	3.62E-15	7.58E-14
135	Parathion		NE	NE	NE	NE
136	Quinoline		4.09E-15	4.29E-14	4.25E-16	4.74E-14
137	Tetrachloroethene		2.10E-20	2.23E-21	NA	2.33E-20
138	Trichloroethene		7.48E-19	5.14E-21	NA	7.53E-19
139	Vapona		8.59E-19	9.69E-18	8.93E-20	1.06E-17
140	Vinyl chloride		1.15E-17	6.15E-19	NA	1.21E-17
141						
142	INORGANICS					
143	Arsenic		6.75E-13	2.83E-14	8.19E-15	7.11E-13
144	Cadmium		2.01E-15	NA	NA	2.01E-15
145	Chromium (VI)		1.92E-15	NA	NA	1.92E-15
146						
147	Total		2.13E-11	1.98E-08	4.28E-13	1.98E-08

TABLE 34
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D Inhalation RfD	E Oral RfD	F Dermal RfD
155	RES-B			
156	SENSITIVITY CASE			
157				
158				
159				
160				
161				
162				
163				
164				
165	ORGANICS			
166	Acetone	1.82E+00	1.00E-01	NC
167	Acetonitrile	1.00E-02	6.00E-02	3.00E-02
168	Acrylonitrile	4.39E-03	2.70E-04	NC
169	Aldrin	2.55E-04	3.00E-05	1.50E-05
170	Aniline	7.76E-03	1.95E-03	9.75E-04
171	Atrazine	5.10E-03	5.00E-03	2.50E-03
172	Benzaldehyde	1.00E-01	1.00E-01	5.00E-02
173	Benzene	3.26E-02	1.00E-03	NC
174	Benzofuran	5.00E-03	5.00E-03	2.50E-03
175	Benzoic Acid	4.00E+00	4.00E+00	2.00E+00
176	Benzonitrile	8.00E-03	8.00E-03	4.00E-03
177	Benzothiazole	1.00E-03	1.00E-03	5.00E-04
178	Biphenyl	1.33E-03	5.00E-02	NC
179	Bis(2-ethylhexyl)phthalate	5.10E-03	4.00E-03	1.00E-02
180	Carbazole	5.00E-03	5.00E-03	2.50E-03
181	Carbon Tetrachloride	3.16E-02	7.00E-04	NC
182	4-Chloroaniline	4.00E-03	4.00E-03	2.00E-03
183	Chlorobenzene	5.00E-03	2.00E-02	NC
184	4-Chlorobiphenyl	2.45E-02	2.45E-02	1.22E-02
185	4,4'-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
186	Chloroethane	2.65E+00	NA	NC
187	Chloroform	5.00E-02	1.00E-02	NC
188	Dibenzofuran	NA	NA	NA
189	Dichlorobenzenes (total)	4.00E-02	9.00E-02	NC
190	1,1-Dichloroethane	1.00E-01	1.00E-01	NC
191	1,2-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
192	1,1-Dichloroethene	2.04E-02	9.00E-03	NC
193	1,2-Dichloroethene	8.10E-01	2.00E-02	NC
194	1,2-Dichloropropane	3.54E-01	8.60E-03	NC
195	Dieldrin	2.55E-04	5.00E-05	2.50E-05
196	Dimethyldisulfide	8.10E-03	8.10E-03	NC
197	Hexachlorobenzene	8.00E-04	8.00E-04	4.00E-04
198	Hydrazine	1.33E-04	6.00E-04	3.00E-04
199	Lindane	5.10E-04	3.00E-04	1.50E-04
200	Malathion	1.02E-02	2.00E-02	1.00E-02
201	Methyl chloride	1.05E-01	1.80E-02	NC
202	Methylene chloride	8.57E-01	6.00E-02	NC
203	Methyl ethyl ketone	9.00E-02	5.00E-01	2.50E-01
204	4-Methylphenol	1.02E-02	5.00E-02	2.50E-02
205	Monomethyl hydrazine	1.94E-05	2.20E-04	1.10E-04
206	Naphthalene	5.10E-02	4.00E-03	2.00E-03
207	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
208	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
209	PAHS			
210	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
211	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
212	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
213	Chrysene	3.00E-02	3.00E-02	1.50E-02
214				

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 34		
156		3.00E-02	3.00E-02	1.50E-02
215	Dibenzo(a,h)anthracene	4.00E-02	4.00E-02	2.00E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Fluorene	3.00E-02	3.00E-02	1.50E-02
218	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
219	Pyrene	5.10E-05	6.00E-03	3.00E-03
220	Parathion	8.00E-04	8.00E-04	4.00E-04
221	Pentachlorobenzene	1.94E-02	6.00E-01	3.00E-01
222	Phenol	1.63E-02	1.00E-03	NC
223	Pyridine	2.00E-01	2.00E-01	1.00E-01
224	quinoline	3.00E-04	3.00E-04	1.50E-04
225	Tetrachlorobenzene	3.46E-01	1.00E-02	NC
226	Tetrachloroethene	5.71E-01	2.00E-01	NC
227	Toluene	3.00E-03	2.00E-02	1.00E-02
228	Trichlorobenzene	2.74E-01	7.35E-03	NC
229	Trichloroethene	1.22E-03	1.22E-03	6.10E-04
230	Unsym. dimethyl hydrazine	8.00E-04	8.00E-04	4.00E-04
231	Vapona	2.00E-01	1.00E+00	NC
232	Vinyl acetate	1.33E-02	1.30E-03	NC
233	Vinyl chloride	8.57E-02	2.30E+00	NC
234	xylene (total)			
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

TABLE 35 ADULT HAZARD INDEX									
C	H	I	J	K	L	M	N	O	
B	INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX	
155	RES-B	1.38E-15	NA	NA	NA	NA	NA	1.38E-15	
156	SENSITIVITY CASE	2.27E-10	3.25E-10	4.04E-17	1.57E-17	1.91E-13	1.41E-13	5.52E-10	
157		2.20E-10	NA	NA	NA	NA	NA	2.20E-10	
158		1.38E-14	2.25E-13	4.83E-14	5.48E-15	9.36E-23	4.37E-16	2.94E-13	
159		1.64E-11	6.17E-11	2.38E-16	9.12E-17	1.20E-16	2.43E-13	7.87E-11	
160		1.54E-13	4.05E-14	4.35E-18	1.35E-18	0.00E+00	5.86E-16	1.96E-13	
161		5.81E-13	2.74E-13	3.87E-18	1.44E-18	2.51E-19	2.16E-15	8.60E-13	
162		2.24E-14	NA	NA	NA	NA	NA	2.24E-14	
163		5.65E-11	1.46E-11	1.53E-15	4.80E-16	1.11E-16	2.10E-13	7.16E-11	
164		7.11E-15	2.22E-15	7.25E-20	2.60E-20	5.49E-21	2.65E-17	9.39E-15	
165		7.76E-11	3.55E-11	5.63E-16	2.08E-16	3.73E-17	2.89E-13	1.12E-10	
166	ORGANICS	2.64E-13	7.23E-14	3.16E-18	1.12E-18	2.51E-21	9.85E-16	3.39E-13	
167	Acetone	2.14E-10	NA	NA	NA	NA	NA	2.14E-10	
168	Acetonitrile	3.06E-14	5.71E-14	3.42E-13	3.84E-14	8.13E-22	2.91E-17	4.69E-13	
169	Acrylonitrile	2.55E-13	4.27E-14	1.72E-17	4.46E-18	6.61E-19	9.49E-16	3.00E-13	
170	Aldrin	1.17E-13	NA	NA	NA	NA	NA	1.17E-13	
171	Aniline	1.82E-14	5.44E-15	1.78E-19	6.41E-20	2.36E-19	6.79E-17	2.38E-14	
172	Atrazine	3.51E-14	NA	NA	NA	NA	NA	3.51E-14	
173	Benzaldehyde	7.34E-15	6.12E-16	1.07E-17	1.55E-18	1.39E-20	2.74E-17	8.03E-15	
174	Benzofuran	3.88E-16	2.65E-17	2.54E-18	3.20E-19	2.45E-22	1.45E-18	4.21E-16	
175	Benzoic Acid	2.43E-15	NE	NE	NE	NE	NE	2.43E-15	
176	Benzonitrile	6.28E-13	NA	NA	NA	NA	NA	6.28E-13	
177	Benzothiazole	NE	NE	NE	NE	NE	NE	NE	
178	Biphenyl	1.82E-14	NA	NA	NA	NA	NA	1.82E-14	
179	Bis(2-ethylhexyl)phthalate	2.09E-14	NA	NA	NA	NA	NA	2.09E-14	
180	Carbazole	1.60E-14	1.92E-13	8.88E-19	3.30E-19	6.75E-16	4.97E-16	2.10E-13	
181	Carbon Tetrachloride	5.48E-14	NA	NA	NA	NA	NA	5.48E-14	
182	4-Chloroaniline	1.19E-15	NA	NA	NA	NA	NA	1.19E-15	
183	Chlorobenzene	1.17E-15	NA	NA	NA	NA	NA	1.17E-15	
184	4-Chlorobiphenyl	1.75E-15	NA	NA	NA	NA	NA	1.75E-15	
185	4,4'-Chlorobiphenyl	2.53E-14	1.65E-12	3.42E-15	4.03E-16	2.16E-20	4.81E-16	2.19E-13	
186	Chloroethane	2.19E-13	NA	NA	NA	NA	NA	2.19E-13	
187	Chloroform	2.14E-11	3.08E-12	1.09E-13	1.40E-14	5.38E-16	7.95E-14	2.47E-11	
188	Dibenzofuran	2.14E-11	9.35E-06	2.76E-15	1.08E-15	5.87E-17	1.37E-10	9.51E-06	
189	Dichlorobenzenes (total)	1.66E-07	1.91E-15	6.85E-19	1.77E-19	1.58E-22	3.73E-17	7.89E-15	
190	1,1-Dichloroethane	5.89E-15	5.16E-17	1.63E-20	4.82E-21	0.00E+00	1.65E-18	9.25E-16	
191	1,2-Dichloroethane	8.70E-16	NA	NA	NA	NA	NA	8.26E-15	
192	1,2-Dichloroethene	8.26E-15	NA	NA	NA	NA	NA	8.26E-15	
193	1,2-Dichloropropane	6.10E-14	9.08E-15	4.22E-21	1.64E-21	0.00E+00	8.16E-18	6.10E-14	
194	Dieldrin	2.14E-11	3.08E-12	1.09E-13	1.40E-14	5.38E-16	7.95E-14	2.47E-11	
195	Dimethyldisulfide	2.14E-11	9.35E-06	2.76E-15	1.08E-15	5.87E-17	1.37E-10	9.51E-06	
196	Hexachlorobenzene	1.66E-07	1.91E-15	6.85E-19	1.77E-19	1.58E-22	3.73E-17	7.89E-15	
197	Hydrazine	5.89E-15	5.16E-17	1.63E-20	4.82E-21	0.00E+00	1.65E-18	9.25E-16	
198	Lindane	8.70E-16	NA	NA	NA	NA	NA	8.26E-15	
199	Malathion	8.26E-15	NA	NA	NA	NA	NA	8.26E-15	
200	Methyl chloride	6.10E-14	9.08E-15	4.22E-21	1.64E-21	0.00E+00	8.16E-18	6.10E-14	
201	Methylene chloride	1.22E-14	1.29E-14	2.20E-19	7.82E-20	5.43E-22	7.40E-17	1.11E-13	
202	Methyl ethyl ketone	9.75E-14	5.52E-06	2.37E-15	9.30E-16	1.60E-10	1.18E-10	5.88E-06	
203	4-Methylphenol	2.30E-15	6.53E-15	2.18E-18	5.53E-19	3.71E-17	1.09E-16	9.13E-15	
204	Monomethyl hydrazine	2.30E-15	6.53E-15	2.18E-18	5.53E-19	3.71E-17	1.09E-16	9.13E-15	
205	Naphthalene	1.22E-11	3.46E-11	1.15E-14	2.92E-15	8.55E-16	5.78E-13	4.81E-11	
206	Naphthalene carbonitrile	2.53E-11	2.69E-09	1.94E-17	7.58E-18	0.00E+00	9.41E-14	2.72E-09	
207	n-Nitrosodimethylamine								
208	PAHS								
209									
210									
211	Acenaphthalene	4.71E-13	1.12E-13	1.26E-16	2.40E-17	1.75E-18	1.75E-15	5.87E-13	
212	Acenaphthene	4.71E-13	5.73E-14	9.46E-17	1.92E-17	6.78E-19	1.75E-15	5.32E-13	
213	Benzo(a)pyrene	1.89E-12	5.59E-14	8.25E-17	9.63E-15	4.67E-18	7.03E-15	2.05E-12	
214	Chrysene	1.89E-13	1.45E-14	1.98E-15	2.43E-16	1.18E-17	7.03E-16	2.07E-13	

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	H	I	J	K	L	M	N	O
155		TABLE 35							
156		1.89E-12	6.60E-14	9.90E-14	1.15E-14	9.56E-15	2.65E-15	7.03E-15	2.08E-12
215	Dibenzo(a,h)anthracene	1.42E-12	1.79E-13	4.16E-15	5.58E-16	7.17E-15	NA	5.28E-15	1.61E-12
216	Fluoranthene	1.42E-13	2.12E-14	6.99E-17	1.19E-17	7.17E-16	7.30E-19	5.28E-16	1.64E-13
217	Fluorene	7.36E-16	8.52E-17	5.36E-19	8.53E-20	3.72E-18	3.35E-18	2.74E-18	8.31E-16
218	Phenanthrene	3.78E-12	4.52E-13	1.02E-14	1.37E-15	1.91E-14	5.35E-17	1.41E-14	4.28E-12
219	Pyrene	2.79E-13	2.98E-16	3.84E-19	8.15E-20	1.18E-17	5.29E-23	8.71E-18	2.76E-13
220	Parathion	8.70E-12	2.23E-12	1.88E-14	2.60E-15	4.40E-14	NA	3.24E-14	1.10E-11
221	Pentachlorobenzene	5.74E-15	2.67E-16	1.21E-21	4.50E-22	9.39E-19	NA	6.91E-19	6.01E-15
222	Phenol	3.81E-11	NA	NA	NA	NA	NA	NA	3.81E-11
223	Pyridine	3.19E-14	1.55E-14	3.91E-19	1.38E-19	1.62E-16	3.17E-20	1.19E-16	4.77E-14
224	Quinoline	1.14E-11	6.45E-12	5.51E-15	9.40E-16	5.77E-14	NA	4.25E-14	1.80E-11
225	Tetrachlorobenzene	3.45E-16	NA	NA	NA	NA	NA	NA	3.45E-16
226	Tetrachloroethene	3.34E-15	NA	NA	NA	NA	NA	NA	3.34E-15
227	Toluene	5.77E-13	7.18E-15	1.95E-17	3.86E-18	4.38E-16	4.80E-19	3.22E-16	5.85E-13
228	Trichlorobenzene	4.65E-15	NA	NA	NA	NA	NA	NA	4.65E-15
229	Trichloroethene	2.25E-08	NA	NA	1.25E-15	1.14E-10	NA	NA	4.65E-15
230	Unsym. dimethyl hydrazine	6.94E-14	2.56E-06	3.19E-15	1.25E-15	1.14E-10	3.60E-17	8.38E-11	2.58E-06
231	Vapona	3.94E-15	3.59E-14	4.24E-19	1.58E-19	3.51E-16	2.64E-22	2.58E-16	1.06E-13
232	Vinyl acetate	5.49E-14	NA	NA	NA	NA	NA	NA	3.94E-15
233	Vinyl chloride	1.59E-15	NA	NA	NA	NA	NA	NA	5.49E-14
234	Xylenes (total)		NA	NA	NA	NA	NA	NA	1.59E-15
235									
236	INORGANICS								
237	Arsenic	4.13E-09	2.03E-11	1.22E-11	1.50E-13	4.27E-12	4.89E-12	3.14E-12	4.18E-09
238	Cadmium	1.21E-10	2.44E-13	1.80E-14	5.03E-16	3.12E-14	NA	2.30E-14	1.21E-10
239	Chromium (III)	4.90E-11	NA	NA	NA	NA	NA	NA	4.90E-11
240	Chromium (VI)	1.72E-11	NA	NA	NA	NA	NA	NA	1.72E-11
241	Copper	6.30E-12	NA	NA	NA	NA	3.08E-14	NA	6.30E-12
242	Iron	1.89E-06	NA	NA	NA	NA	NA	NA	1.89E-06
243	Mercury	4.69E-10	6.23E-12	1.69E-13	6.23E-12	6.78E-13	NA	4.99E-13	4.83E-10
244	Selenium	5.08E-10	NA	NA	NA	NA	NA	NA	5.08E-10
245	Silver	6.32E-11	NA	NA	NA	NA	NA	NA	6.32E-11
246	Zinc	3.47E-11	NA	NA	NA	NA	1.29E-14	NA	3.47E-11
247									
248	Total (Hazard Index)	2.44E-06	1.74E-05	1.31E-11	6.48E-12	4.68E-10	4.94E-12	3.44E-10	1.99E-05

155	B	C	Q	R	S	T	U	V	W	X
156	161	RES-B	TABLE 36	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX
157	162	SENSITIVITY CASE	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX
158	163		HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX
159	164		HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX
160	165	ORGANICS	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX	HAZARD INDEX
161	166	Acetone	3.11E-15	NA	2.33E-16	NA	1.73E-12	NA	NA	3.11E-15
162	167	Acetonitrile	5.12E-10	5.81E-10	2.33E-16	3.93E-17	1.73E-12	2.92E-19	1.18E-12	1.10E-09
163	168	Acrylonitrile	4.96E-10	NA	NA	NA	NA	NA	NA	4.96E-10
164	169	Aldrin	3.12E-14	3.39E-13	2.79E-13	1.37E-14	5.36E-15	2.11E-22	3.65E-15	6.72E-13
165	170	Aniline	3.71E-11	1.24E-10	1.38E-15	2.27E-16	2.99E-12	2.70E-16	2.04E-12	1.66E-10
166	171	Atrazine	3.49E-13	6.88E-14	2.50E-17	3.38E-18	7.20E-15	0.00E+00	4.90E-15	4.30E-13
167	172	Benzaldehyde	1.31E-12	5.42E-13	2.23E-17	3.58E-18	2.65E-14	5.67E-19	1.81E-14	1.90E-12
168	173	Benzene	5.06E-14	NA	NA	NA	NA	NA	NA	5.06E-14
169	174	Benzo(a)pyrene	1.28E-10	2.49E-11	8.85E-15	1.20E-15	2.58E-12	2.50E-16	1.76E-12	1.57E-10
170	175	Benzo(b)fluoranthene	1.61E-14	4.30E-15	4.19E-19	6.49E-20	3.25E-16	1.24E-20	2.21E-16	2.09E-14
171	176	Benzo(k)fluoranthene	1.75E-10	6.60E-11	3.25E-15	5.18E-16	3.55E-12	8.43E-17	2.42E-10	2.47E-10
172	177	Benzothiazole	5.97E-13	1.39E-13	1.83E-17	2.79E-18	1.21E-14	5.67E-21	8.24E-15	7.56E-13
173	178	Biphenyl	4.83E-10	NA	NA	NA	NA	NA	NA	4.83E-10
174	179	Bis(2-ethylhexyl)phthalate	6.91E-14	8.59E-14	1.98E-12	9.59E-14	1.78E-15	1.83E-21	2.43E-16	2.23E-12
175	180	Carbazole	5.76E-13	7.10E-14	9.91E-17	1.11E-17	1.17E-14	1.49E-18	7.94E-15	6.66E-13
176	181	Carbon Tetrachloride	2.64E-13	NA	NA	NA	NA	NA	NA	2.64E-13
177	182	4-Chloroaniline	4.12E-14	1.08E-14	1.03E-18	1.60E-19	8.34E-16	5.34E-19	5.68E-16	5.34E-14
178	183	Chlorobenzene	7.92E-14	NA	NA	NA	NA	NA	NA	7.92E-14
179	184	4-Chlorobiphenyl	1.66E-14	9.94E-16	6.21E-17	3.87E-18	3.35E-16	3.13E-20	2.29E-16	1.82E-14
180	185	4,4'-Dichlorobiphenyl	8.77E-16	4.32E-17	1.46E-17	7.97E-19	1.78E-17	5.53E-22	1.21E-17	9.65E-16
181	186	Chloroethane	5.49E-15	NE	NE	NE	NE	NE	NE	5.49E-15
182	187	Chloroform	1.42E-12	NA	NA	NA	NA	NA	NA	1.42E-12
183	188	Dibenzofuran	NE	NE	NE	NE	NE	NE	NE	NE
184	189	Dichlorobenzenes (total)	4.12E-14	NA	NA	NA	NA	NA	NA	4.12E-14
185	190	1,1-Dichloroethane	4.71E-14	NA	NA	NA	NA	NA	NA	4.71E-14
186	191	1,2-Dichloroethane	3.61E-14	3.18E-13	5.13E-18	8.23E-19	6.10E-15	2.64E-20	4.15E-15	3.65E-13
187	192	1,1-Dichloroethene	1.24E-13	NA	NA	NA	NA	NA	NA	1.24E-13
188	193	1,2-Dichloroethene	2.69E-15	NA	NA	NA	NA	NA	NA	2.69E-15
189	194	1,2-Dichloropropane	2.64E-15	NA	NA	NA	NA	NA	NA	2.64E-15
190	195	Dieldrin	5.72E-14	2.48E-12	1.93E-14	1.01E-15	5.91E-15	4.87E-20	4.03E-15	2.57E-12
191	196	Dimethylidithiophene	4.95E-13	NA	NA	NA	NA	NA	NA	4.95E-13
192	197	Hexachlorobenzene	3.75E-07	4.81E-12	6.30E-13	3.48E-14	9.76E-13	1.21E-15	6.65E-13	5.53E-11
193	198	Hydrazine	1.33E-14	1.75E-05	1.59E-14	2.70E-15	1.68E-09	1.33E-16	1.15E-09	1.79E-05
194	199	Lindane	1.96E-15	3.14E-15	3.95E-18	4.42E-19	4.58E-16	3.56E-22	3.12E-16	1.72E-14
195	200	Malathion	1.86E-14	9.55E-17	9.42E-20	1.20E-20	2.03E-17	0.00E+00	1.38E-17	2.09E-15
196	201	Methyl chloride	1.38E-13	NA	NA	NA	NA	NA	NA	1.38E-13
197	202	Methylene chloride	2.75E-14	1.60E-14	2.44E-20	4.08E-21	1.00E-16	0.00E+00	6.82E-17	4.37E-14
198	203	4-Methylphenol	2.20E-13	2.18E-14	1.27E-18	1.95E-19	9.09E-16	1.23E-21	6.19E-16	2.43E-13
199	204	Monomethyl hydrazine	8.10E-07	1.13E-05	1.37E-14	2.32E-15	1.45E-09	1.14E-16	9.85E-10	1.21E-05
200	205	Naphthalene	5.19E-15	1.06E-14	1.26E-17	1.38E-18	1.34E-15	8.38E-17	9.13E-16	1.81E-14
201	206	Naphthalene carbonitrile	2.75E-11	5.58E-11	6.64E-14	7.29E-15	7.09E-12	1.93E-15	4.83E-12	9.53E-11
202	207	n-Nitrosodimethylamine	5.71E-11	4.13E-09	1.12E-16	1.89E-17	1.16E-12	0.00E+00	7.87E-13	4.19E-09
203	208	PAHs	1.06E-12	1.74E-13	7.26E-16	6.00E-17	2.15E-14	3.95E-18	1.47E-14	1.27E-12
204	209	Acenaphthalene	1.06E-12	9.37E-14	5.46E-16	4.79E-17	2.15E-14	1.53E-18	1.47E-14	1.19E-12
205	210	Benzo(a)pyrene	4.27E-12	1.00E-13	4.76E-13	2.40E-14	8.64E-15	1.06E-17	5.88E-14	5.01E-12
206	211	Chrysene	4.27E-13	2.35E-14	1.14E-14	6.05E-16	8.64E-15	2.67E-17	5.88E-15	4.77E-13

B	C	Q	R	S	T	U	V	W	X
155		TABLE 36							
156		4.27E-12	1.15E-13	5.72E-13	2.87E-14	8.64E-14	5.98E-15	5.88E-14	5.13E-12
215	Dibenzo(a,h)anthracene	3.20E-12	2.82E-13	2.40E-14	1.39E-15	6.48E-14	NA	4.41E-14	3.62E-12
216	Fluorene	3.20E-13	3.36E-14	4.04E-16	2.96E-17	6.48E-15	1.65E-18	4.41E-15	3.65E-13
217	Phenanthrene	1.66E-15	1.36E-16	3.10E-18	2.13E-19	3.36E-17	7.57E-18	2.29E-17	1.87E-15
218	Pyrene	8.53E-12	7.14E-13	5.87E-14	3.42E-15	1.73E-13	1.21E-16	1.18E-13	9.60E-12
219	Parathion	6.22E-13	4.88E-16	2.22E-18	2.03E-19	1.07E-16	1.19E-22	7.29E-17	6.22E-12
220	Pentachlorobenzene	1.96E-11	3.42E-12	1.09E-13	6.48E-15	3.98E-13	NA	2.71E-13	2.39E-11
221	Phenol	1.30E-14	4.43E-16	6.99E-21	1.12E-21	8.49E-18	NA	5.78E-18	1.34E-14
222	Pyridine	8.59E-11	NA	NA	NA	NA	NA	NA	8.59E-11
223	Quinoline	7.21E-14	2.68E-14	2.26E-18	3.43E-19	1.46E-15	7.16E-20	9.94E-16	1.01E-13
224	Tetrachlorobenzene	2.57E-11	9.81E-12	3.18E-14	2.34E-15	5.21E-13	NA	3.55E-13	3.65E-11
225	Tetrachloroethene	7.80E-16	NA	NA	NA	NA	NA	NA	7.80E-16
226	Toluene	7.53E-15	NA	NA	NA	NA	NA	NA	7.53E-15
227	Trichlorobenzene	1.30E-12	1.21E-14	1.13E-16	9.63E-18	3.96E-15	1.08E-18	2.70E-15	1.32E-12
228	Trichloroethene	1.05E-14	NA	NA	NA	NA	NA	NA	1.05E-14
229	Unsym. dimethyl hydrazine	5.08E-08	4.73E-06	1.84E-14	3.12E-15	1.03E-09	8.13E-17	7.00E-10	4.78E-06
230	Vapona	1.57E-13	7.10E-14	2.45E-18	3.95E-19	3.17E-15	5.97E-22	2.16E-15	2.33E-13
231	Vinyl acetate	8.89E-15	NA	NA	NA	NA	NA	NA	8.89E-15
232	Vinyl chloride	1.24E-13	NA	NA	NA	NA	NA	NA	1.24E-13
233	Xylenes (total)	3.58E-15	NA	NA	NA	NA	NA	NA	3.58E-15
234									
235									
236	INORGANICS								
237	Arsenic	9.33E-09	3.74E-11	7.03E-11	3.73E-13	3.85E-11	1.10E-11	2.63E-11	9.52E-09
238	Cadmium	2.73E-10	4.32E-13	1.04E-13	1.25E-15	2.82E-13	NA	1.92E-13	2.74E-10
239	Chromium (III)	1.11E-10	NA	NA	NA	NA	NA	NA	1.11E-10
240	Chromium (VI)	3.89E-11	NA	NA	NA	NA	NA	NA	3.89E-11
241	Copper	1.42E-11	NA	NA	NA	NA	6.95E-14	NA	1.43E-11
242	Iron	4.26E-06	NA	NA	NA	NA	NA	NA	4.26E-06
243	Mercury	1.06E-09	1.07E-11	9.76E-13	1.55E-11	6.12E-12	NA	4.17E-12	1.10E-09
244	Selenium	1.15E-09	NA	NA	NA	NA	NA	NA	1.15E-09
245	Silver	1.43E-10	NA	NA	NA	NA	NA	NA	1.43E-10
246	Zinc	7.84E-11	NA	NA	NA	NA	2.92E-14	NA	7.84E-11
247									
248	Total (Hazard Index)	5.51E-06	3.36E-05	7.57E-11	1.62E-11	4.22E-09	1.11E-11	2.88E-09	3.91E-05

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155 B	C	Z	AA	AB
156		TABLE 37		
157		INFANT HAZARD INDEX		
158				
159				
160				
161 RES-B		INHALATION	BREAST MILK	TOTAL
162 SENSITIVITY CASE		HAZARD	INGESTION	INFANT
163		QUOTIENT	HAZARD	HAZARD
164			QUOTIENT	INDEX
165				
166 ORGANICS				
167 Acetone		2.03E-15	6.43E-16	2.68E-15
168 Acetonitrile		3.35E-10	1.32E-09	1.66E-09
169 Acrylonitrile		3.25E-10	1.63E-11	3.41E-10
170 Aldrin		2.04E-14	1.45E-12	1.47E-12
171 Aniline		2.43E-11	4.64E-10	4.88E-10
172 Atrazine		2.28E-13	7.25E-13	9.53E-13
173 Benzaldehyde		8.58E-13	3.13E-12	3.98E-12
174 Benzene		3.31E-14	1.25E-15	3.43E-14
175 Benzofuran		8.35E-11	2.60E-10	3.44E-10
176 Benzoic Acid		1.05E-14	3.41E-14	4.46E-14
177 Benzonitrile		1.15E-10	4.06E-10	5.21E-10
178 Benzothiazole		3.91E-13	1.23E-12	1.62E-12
179 Biphenyl		3.16E-10	1.46E-13	3.16E-10
180 Bis(2-ethylhexyl)phthalate		4.52E-14	1.74E-12	1.78E-12
181 Carbazole		3.77E-13	1.09E-12	1.47E-12
182 Carbon Tetrachloride		1.73E-13	1.36E-13	3.09E-13
183 4-Chloroaniline		2.70E-14	8.67E-14	1.14E-13
184 Chlorobenzene		5.18E-14	2.25E-16	5.21E-14
185 4-Chlorobiphenyl		1.08E-14	2.92E-14	4.00E-14
186 4,4'-Chlorobiphenyl		5.74E-16	1.53E-15	2.10E-15
187 Chloroethane		3.59E-15	NE	3.59E-15
188 Chloroform		9.29E-13	8.06E-14	1.01E-12
189 Dibenzofuran		NE	NE	NE
190 Dichlorobenzenes (total)		2.70E-14	2.08E-16	2.72E-14
191 1,1-Dichloroethane		3.09E-14	5.36E-16	3.14E-14
192 1,2-Dichloroethane		2.36E-14	1.19E-12	1.21E-12
193 1,1-Dichloroethene		8.10E-14	3.19E-15	8.41E-14
194 1,2-Dichloroethene		1.76E-15	1.24E-15	3.00E-15
195 1,2-Dichloropropane		1.73E-15	1.23E-15	2.96E-15
196 Dieldrin		3.75E-14	6.51E-12	6.55E-12
197 Dimethyldisulfide		3.24E-13	5.62E-15	3.30E-13
198 Hexachlorobenzene		3.16E-11	2.03E-11	5.18E-11
199 Hydrazine		2.45E-07	3.42E-05	3.44E-05
200 Lindane		8.70E-15	4.36E-14	5.23E-14
201 Malathion		1.28E-15	1.81E-15	3.10E-15
202 Methyl chloride		1.22E-14	1.24E-15	1.34E-14
203 Methylene chloride		9.02E-14	2.24E-14	1.13E-13
204 Methyl ethyl ketone		1.80E-14	4.11E-14	5.91E-14
205 4-Methylphenol		1.44E-13	1.20E-13	2.64E-13
206 Monomethyl hydrazine		5.30E-07	2.02E-05	2.07E-05
207 Naphthalene		3.40E-15	1.31E-13	1.35E-13
208 Naphthalene carbonitrile		1.80E-11	6.94E-10	7.12E-10
209 n-Nitrosodimethylamine		3.74E-11	9.90E-09	9.94E-09
210 PAHs				
211 Acenaphthalene		6.95E-13	2.13E-12	2.83E-12
212 Acenaphthene		6.95E-13	1.93E-12	2.63E-12
213 Benzo(a)pyrene		2.79E-12	7.46E-12	1.03E-11
214 Chrysene		2.79E-13	7.53E-13	1.03E-12

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155	B	C	Z	AA	AB
156			TABLE 37		
215		Dibenzo(a,h)anthracene	2.79E-12	7.57E-12	1.04E-11
216		Fluoranthene	2.09E-12	5.86E-12	7.96E-12
217		Fluorene	2.09E-13	5.97E-13	8.06E-13
218		Phenanthrene	1.09E-15	3.02E-15	4.11E-15
219		Pyrene	5.58E-12	1.55E-11	2.11E-11
220		Parathion	4.07E-13	9.66E-15	4.16E-13
221		Pentachlorobenzene	1.29E-11	9.04E-12	2.19E-11
222		Phenol	8.48E-15	1.65E-15	1.01E-14
223		Pyridine	5.62E-11	1.59E-11	7.22E-11
224		Quinoline	4.72E-14	1.73E-13	2.21E-13
225		Tetrachlorobenzene	1.68E-11	1.47E-11	3.16E-11
226		Tetrachloroethene	5.10E-16	3.07E-16	8.17E-16
227		Toluene	4.93E-15	4.07E-17	4.97E-15
228		Trichlorobenzene	8.53E-13	7.75E-14	9.31E-13
229		Trichloroethene	6.87E-15	4.45E-15	1.13E-14
230		Unsym. dimethyl hydrazine	3.32E-08	9.40E-06	9.43E-06
231		Vapona	1.02E-13	3.85E-13	4.87E-13
232		Vinyl acetate	5.82E-15	2.02E-17	5.84E-15
233		Vinyl chloride	8.11E-14	1.44E-14	9.55E-14
234		Xylenes (total)	2.35E-15	5.82E-20	2.35E-15
235					
236	INORGANICS				
237	Arsenic		6.11E-09	NE	6.11E-09
238	Cadmium		1.79E-10	NE	1.79E-10
239	Chromium (III)		7.24E-11	NE	7.24E-11
240	Chromium (VI)		2.55E-11	NE	2.55E-11
241	Copper		9.32E-12	NE	9.32E-12
242	Iron		2.79E-06	NE	2.79E-06
243	Mercury		6.93E-10	NE	6.93E-10
244	Selenium		7.51E-10	NE	7.51E-10
245	Silver		9.33E-11	NE	9.33E-11
246	Zinc		5.13E-11	NE	5.13E-11
247					
248	Total (Hazard Index)		3.61E-06	6.38E-05	6.74E-05

A	B	C	D
253	TABLE 38		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256	RES-B		
257	SENSITIVITY CASE		
258			
259			
260	Adult		NA
261	Inhalation		
262			
263	Ingestion		82.8739
264	Vegetables		82.8720
265	Milk		0.0000
266	Beef		0.0000
267	Soil\Dust		0.0018
268	Fish		0.0000
269			
270	Dermal		0.0013
271			
272	Child		
273	Inhalation		0.0651
274			
275	Ingestion		12.2150
276	Vegetables		12.2137
277	Milk		0.0000
278	Beef		0.0000
279	Soil\Dust		0.0013
280	Fish		0.0000
281			
282	Dermal		0.0009
283			
284	Infant		
285	Inhalation		0.0426
286			
287	Breast Milk Ingestion		4.8013
288			
290	Total		100.0000

A	B	C	AS	AT
98			TABLE 39	
99			ADULT INHALATION CARCINOGENIC RISK	
100			(These numbers are for sensitivity	
101			analysis)	
102				
103	RES-B		INHALATION	
104	SENSITIVITY CASE		ADULT	
105			CARC.	
106			RISK	
107				
108	ORGANICS			
109	Acrylonitrile		6.61E-15	
110	Aldrin		1.71E-18	
111	Aniline		2.08E-17	
112	Benzene		6.05E-19	
113	Bis(2-ethylhexyl)phthalate		6.24E-20	
114	Carbazole		7.28E-19	
115	Carbon Tetrachloride		1.37E-17	
116	Chloroform		7.27E-17	
117	1,4-Dichlorobenzene		3.16E-20	
118	1,1-Dichloroethane		NE	
119	1,2-Dichloroethane		1.70E-18	
120	1,1-Dichloroethene		3.83E-17	
121	1,2-Dichloropropane		8.04E-19	
122	Dieldrin		2.95E-18	
123	Hexachlorobenzene		7.81E-16	
124	Hydrazine		1.08E-11	
125	Lindane		1.12E-19	
126	Methyl chloride		1.56E-19	
127	Methylene chloride		2.09E-17	
128	4-Methylphenol		NE	
129	Monomethyl hydrazine		2.19E-13	
130	n-Nitrosodimethylamine		1.03E-14	
131	PAHS			
132	Benzo(a)pyrene		9.88E-15	
133	Chrysene		9.88E-16	
134	Dibenzo(a,h)anthracene		9.88E-15	
135	Parathion		NE	
136	Quinoline		2.19E-15	
137	Tetrachloroethene		1.13E-20	
138	Trichloroethene		4.01E-19	
139	Vapona		4.60E-19	
140	Vinyl chloride		6.15E-18	
141				
142	INORGANICS			
143	Arsenic		3.61E-13	
144	Cadmium		1.07E-15	
145	Chromium (VI)		1.03E-15	
146				
147	Total		1.14E-11	
148				
149				
150				

INHALATION
EXPOSURE DURATION

2 YEARS

9.3 FARMER SCENARIO

9.3.1 Base Case Emissions Farmer Scenario

A	B	C	D	E	F	G	H	I	J	K
2	3	4	5	6	7	8	9	10	11	12
BASE CASE	ER	EMISSION RATE g/sec	20-Jun-91 13:53:03 FARM	AVG. AMBIENT CONC. ug/M3	TOTAL DEPOSITION RATE g/M2/YR	DRY DEPOSITION RATE g/M2/YR	CO AVERAGE CONC IN SOIL .2M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	CO AVERAGE CALCULATED CONC IN SOIL .1M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .1M mg/Kg
TABLE 1-A										
13	ORGANICS									
14	Acetone	1.26E-10		1.54E-11	NA	NA	2.37E-09	2.40E-09	4.73E-09	4.80E-09
15	Acetonitrile	1.14E-07		1.39E-08	3.42E-10	5.76E-11	NA	NA	NA	NA
16	Acrylonitrile	4.85E-08		5.92E-09	NA	NA	NA	NA	NA	NA
17	Aldrin	1.77E-13		2.16E-14	5.31E-16	8.94E-17	3.67E-15	3.73E-15	7.35E-15	7.45E-15
18	Aniline	6.41E-09		7.82E-10	1.92E-11	3.24E-12	1.33E-10	1.35E-10	2.66E-10	2.70E-10
19	Atrazine	3.96E-11		4.83E-12	1.19E-13	2.00E-14	8.22E-13	8.34E-13	1.64E-12	1.67E-12
20	Benzaldehyde	2.92E-09		3.56E-10	8.76E-12	1.47E-12	6.06E-11	6.15E-11	1.21E-10	1.23E-10
21	Benzene	3.67E-11		4.48E-12	NA	NA	NA	NA	NA	NA
22	Benzofuran	1.42E-08		1.73E-09	4.26E-11	7.17E-12	2.95E-10	2.99E-10	5.89E-10	5.98E-10
23	Benzoic Acid	1.43E-09		1.74E-10	4.23E-12	7.22E-13	2.97E-11	3.01E-11	5.94E-11	6.02E-11
24	Benzonitrile	3.12E-08		3.81E-09	9.36E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09
25	Benzothiazole	1.33E-11		1.62E-12	3.99E-14	6.72E-15	2.76E-13	2.80E-13	5.52E-13	5.60E-13
26	Biphenyl	1.43E-08		1.74E-09	NA	NA	NA	NA	NA	NA
27	Bis(2-ethylhexyl)phthalate	7.85E-12		9.58E-13	2.36E-14	3.96E-15	1.63E-13	1.65E-13	3.26E-13	3.31E-13
28	Carbazole	6.41E-11		7.82E-12	1.92E-13	3.24E-14	1.33E-12	1.35E-12	2.66E-12	2.70E-12
29	Carbon Tetrachloride	1.86E-10		2.27E-11	NA	NA	NA	NA	NA	NA
30	4-Chloroaniline	3.67E-12		4.48E-13	1.10E-14	1.85E-15	7.62E-14	7.73E-14	1.52E-13	1.55E-13
31	Chlorobenzene	8.82E-12		1.08E-12	NA	NA	NA	NA	NA	NA
32	4-Chlorobiphenyl	9.04E-12		1.10E-12	2.71E-14	4.57E-15	1.88E-13	1.90E-13	3.75E-13	3.81E-13
33	4,4'-Chlorobiphenyl	4.55E-13		5.55E-14	1.36E-15	2.30E-16	9.44E-15	9.58E-15	1.89E-14	1.92E-14
34	Chloroethane	3.24E-10		3.95E-11	9.72E-13	1.64E-13	6.72E-12	6.82E-12	1.34E-11	1.36E-11
35	Chloroform	1.58E-09		1.93E-10	NA	NA	NA	NA	NA	NA
36	Dibenzofuran	2.85E-10		3.48E-11	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
37	Dichlorobenzenes (total)	3.67E-11		4.48E-12	NA	NA	NA	NA	NA	NA
38	1,4-Dichlorobenzene	2.32E-12		2.83E-13	NA	NA	NA	NA	NA	NA
39	1,1-Dichloroethane	1.05E-10		1.28E-11	NA	NA	NA	NA	NA	NA
40	1,2-Dichloroethane	3.28E-11		4.00E-12	9.84E-14	1.66E-14	6.81E-13	6.91E-13	1.36E-12	1.38E-12
41	1,1-Dichloroethene	5.62E-11		6.86E-12	NA	NA	NA	NA	NA	NA
42	1,2-Dichloroethene	4.86E-11		5.93E-12	NA	NA	NA	NA	NA	NA
43	1,2-Dichloropropane	2.08E-11		2.54E-12	NA	NA	NA	NA	NA	NA
44	Dieldrin	3.25E-13		3.96E-14	9.75E-16	1.64E-16	6.74E-15	6.84E-15	1.35E-14	1.37E-14
45	Dimethyldisulfide	8.93E-11		1.09E-11	NA	NA	NA	NA	NA	NA
46	Hexachlorobenzene	8.59E-10		1.05E-10	2.58E-12	4.34E-13	1.78E-11	1.81E-11	3.57E-11	3.62E-11
47	Hydrazine	1.11E-06		1.35E-07	3.33E-09	5.61E-10	2.30E-08	2.34E-08	4.61E-08	4.67E-08
48	Lindane	1.51E-13		1.84E-14	4.53E-16	7.63E-17	3.13E-15	3.18E-15	6.27E-15	6.36E-15
49	Malathion	4.46E-13		5.44E-14	1.34E-15	2.25E-16	9.26E-15	9.39E-15	1.85E-14	1.88E-14
50	Methyl chloride	4.36E-11		5.32E-12	NA	NA	NA	NA	NA	NA
51	Methylene chloride	2.63E-09		3.21E-10	NA	NA	NA	NA	NA	NA
52	Methyl ethyl ketone	5.51E-11		6.72E-12	1.65E-13	2.78E-14	1.14E-12	1.16E-12	2.29E-12	2.32E-12
53	4-Methylphenol	5.00E-11		6.10E-12	1.50E-13	2.53E-14	1.04E-12	1.05E-12	2.08E-12	2.11E-12
54	Monomethyl hydrazine	3.50E-07		4.27E-08	1.05E-09	1.77E-10	7.26E-09	7.37E-09	1.45E-08	1.47E-08
55	Naphthalene	5.90E-12		7.20E-13	1.77E-14	2.98E-15	1.22E-13	1.24E-13	2.45E-13	2.48E-13
56	Naphthalene carbonitrile	3.12E-08		3.81E-09	9.36E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09
57	n-Nitrosodimethylamine PAHs	3.56E-10		4.34E-11	1.07E-12	1.80E-13	7.39E-12	7.49E-12	1.48E-11	1.50E-11
58	Acenaphthalene	1.42E-09		1.73E-10	4.26E-12	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11
59	Acenaphthene	1.42E-09		1.73E-10	4.26E-12	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11
60	Benzo(a)pyrene	2.85E-09		3.48E-10	8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10

TABLE 1-A										
A	B	C	D	E	F	G	H	I	J	K
61	Chrysene		2.85E-10	3.48E-11	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		2.85E-09	3.48E-10	8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluorene		2.85E-09	3.48E-10	8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Phenanthrene		2.85E-10	3.48E-11	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Pyrene		1.11E-12	1.35E-13	3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Parathion		5.70E-09	6.95E-10	1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Pentachlorobenzene		7.06E-13	8.61E-14	2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Phenol		3.50E-10	4.27E-11	1.05E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Pyridine		5.60E-12	6.83E-13	1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Quinoline		3.12E-08	3.81E-09	NA	NA	NA	NA	NA	NA
71	Tetrachlorobenzene		3.21E-10	3.92E-11	9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachloroethene		1.72E-10	2.10E-11	5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Toluene		6.01E-12	7.33E-13	NA	NA	NA	NA	NA	NA
74	Trichlorobenzene		9.58E-11	1.17E-11	2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
75	Trichloroethene		8.71E-11	1.06E-11	NA	NA	NA	NA	NA	NA
76	Unsym. dimethyl hydrazine		6.41E-11	7.82E-12	NA	NA	NA	NA	NA	NA
77	Vapona		1.39E-06	1.68E-07	4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vinyl acetate		2.79E-12	3.40E-13	8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl chloride		3.96E-11	4.83E-12	NA	NA	NA	NA	NA	NA
80	Xylenes (total)		3.67E-11	4.48E-12	NA	NA	NA	NA	NA	NA
81			6.84E-12	8.34E-13	NA	NA	NA	NA	NA	NA
82										
83	INORGANICS									
84	Arsenic		3.76E-08	4.59E-09	1.13E-10	1.90E-11	7.80E-10	7.92E-10	1.56E-09	1.58E-09
85	Cadmium		2.18E-10	2.66E-11	6.54E-13	1.10E-13	4.52E-12	4.59E-12	9.05E-12	9.18E-12
86	Chromium (III)		9.66E-10	1.18E-10	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		3.40E-11	4.15E-12	NA	NA	NA	NA	NA	NA
88	Copper		1.43E-09	1.74E-10	NA	NA	NA	NA	NA	NA
89	Iron		3.47E-05	4.23E-06	NA	NA	NA	NA	NA	NA
90	Lead		1.41E-09	1.72E-10	4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
91	Mercury		1.41E-09	1.72E-10	4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
92	Selenium		4.27E-09	5.21E-10	NA	NA	NA	NA	NA	NA
93	Silver		1.95E-11	2.38E-12	NA	NA	NA	NA	NA	NA
94	Zinc		1.12E-08	1.37E-09	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 Yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/WET TDF

CO = D*AT*1000

SD*BD
AC = ER * DFI
D = ER * X DF

A	B	C	M	N	O	P	Q	R
2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37
38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55
56	57	58	59	60				
BASE CASE	TABLE 1-B CATTLE FEED	D	DEPOSITION RATE g/m2/yr	DEPOSITION RATE g/m2/yr	CO AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	CO AVERAGE CALCULATED CONC IN SOIL .1M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .1M mg/Kg
20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM	20-Jun-91 13:33:03 FARM
ORGANICS	Acetone	NA	3.42E-10	NA	2.37E-09	2.40E-09	4.73E-09	NA
Acetonitrile	Acetonitrile	NA	5.76E-11	NA	NA	NA	NA	4.80E-09
Aldrin	Aldrin	NA	8.94E-17	NA	3.67E-15	3.73E-15	7.35E-15	7.45E-15
Aniline	Aniline	NA	3.24E-12	NA	1.33E-10	1.35E-10	2.66E-10	2.70E-10
Atrazine	Atrazine	NA	2.00E-14	NA	8.22E-13	8.34E-13	1.64E-12	1.67E-12
Benzaldehyde	Benzaldehyde	NA	1.47E-12	NA	6.06E-11	6.15E-11	1.21E-10	1.23E-10
Benzene	Benzene	NA	7.17E-12	NA	2.95E-10	2.99E-10	5.89E-10	5.98E-10
Benzofuran	Benzofuran	NA	7.22E-13	NA	2.97E-11	3.01E-11	5.94E-11	6.02E-11
Benzoic Acid	Benzoic Acid	NA	1.58E-11	NA	6.47E-10	6.57E-10	1.29E-09	1.31E-09
Benzonitrile	Benzonitrile	NA	6.72E-15	NA	2.76E-13	2.80E-13	5.52E-13	5.60E-13
Benzothiazole	Benzothiazole	NA	3.96E-14	NA	1.63E-13	1.65E-13	3.26E-13	3.31E-13
Biphenyl	Biphenyl	NA	3.24E-14	NA	1.33E-12	1.35E-12	2.66E-12	2.70E-12
Bis(2-ethylhexyl)phthalate	Bis(2-ethylhexyl)phthalate	NA	1.85E-15	NA	7.62E-14	7.73E-14	1.52E-13	1.55E-13
Carbazole	Carbazole	NA	4.57E-15	NA	1.88E-13	1.90E-13	3.75E-13	3.81E-13
Carbon Tetrachloride	Carbon Tetrachloride	NA	2.30E-16	NA	9.44E-15	9.58E-15	1.89E-14	1.92E-14
4-Chloroaniline	4-Chloroaniline	NA	1.64E-13	NA	6.72E-12	6.82E-12	1.34E-11	1.36E-11
Chlorobenzene	Chlorobenzene	NA	1.44E-13	NA	5.91E-12	6.00E-12	1.18E-11	1.20E-11
4-Chlorobiphenyl	4-Chlorobiphenyl	NA	8.55E-13	NA	NA	NA	NA	NA
Chloroethane	Chloroethane	NA	1.66E-14	NA	6.81E-13	6.91E-13	1.36E-12	1.38E-12
Chloroform	Chloroform	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Dibenzofuran	Dibenzofuran	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Dichlorobenzenes (total)	Dichlorobenzenes (total)	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
1,4-Dichlorobenzene	1,4-Dichlorobenzene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
1,1-Dichloroethane	1,1-Dichloroethane	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
1,2-Dichloroethane	1,2-Dichloroethane	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
1,1-Dichloroethene	1,1-Dichloroethene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
1,2-Dichloroethene	1,2-Dichloroethene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Dieldrin	Dieldrin	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Dimethyldisulfide	Dimethyldisulfide	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Hexachlorobenzene	Hexachlorobenzene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Hydrazine	Hydrazine	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Lindane	Lindane	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Malathion	Malathion	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Methyl chloride	Methyl chloride	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Methylene chloride	Methylene chloride	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Methyl ethyl ketone	Methyl ethyl ketone	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
4-Methylphenol	4-Methylphenol	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Monomethyl hydrazine	Monomethyl hydrazine	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Naphthalene	Naphthalene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Naphthalene carbonitrile	Naphthalene carbonitrile	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
n-Nitrosodimethylamine	n-Nitrosodimethylamine	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
PAHs	PAHs	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Acenaphthalene	Acenaphthalene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Acenaphthene	Acenaphthene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14
Benzo(a)pyrene	Benzo(a)pyrene	NA	1.64E-16	NA	6.74E-15	6.84E-15	1.35E-14	1.37E-14

A	B	C	M	N	O	P	Q	R
TABLE 1-B								
61	Chrysene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Fluorene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		1.05E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		NA	NA	NA	NA	NA	NA
71	Quinoline		9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		NA	NA	NA	NA	NA	NA
74	Toluene		NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		NA	NA	NA	NA	NA	NA
80	Vinyl chloride		NA	NA	NA	NA	NA	NA
81	Xylenes (total)		NA	NA	NA	NA	NA	NA
82								
INORGANICS								
83	Arsenic		1.13E-10	1.90E-11	7.80E-10	7.92E-10	1.56E-09	1.58E-09
84	Cadmium		6.54E-13	1.10E-13	4.52E-12	4.59E-12	9.05E-12	9.18E-12
85	Chromium (III)		NA	NA	NA	NA	NA	NA
86	Chromium (VI)		NA	NA	NA	NA	NA	NA
87	Copper		NA	NA	NA	NA	NA	NA
88	Iron		NA	NA	NA	NA	NA	NA
89	Lead		4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
90	Mercury		4.23E-12	7.12E-13	2.93E-11	2.97E-11	5.85E-11	5.94E-11
91	Selenium		NA	NA	NA	NA	NA	NA
92	Silver		NA	NA	NA	NA	NA	NA
93	Zinc		NA	NA	NA	NA	NA	NA
94								
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								

2.0 YRS ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/NET TDF

D*AT*1000

SD*BD
D = ER * X DF

A	B	C	T	U	V	W	X	Y	Z	AA
2	3		TABLE 2							
4	5		ADULT TOTAL EXPOSURE - AVERAGE							
6	7									
8	9									
10	11									
12	13									
14	15									
16	17									
18	19									
20	21									
22	23									
24	25									
26	27									
28	29									
30	31									
32	33									
34	35									
36	37									
38	39									
40	41									
42	43									
44	45									
46	47									
48	49									
50	51									
52	53									
54	55									
56	57									
58	59									
60										

BASE CASE

18-Jun-91
15:15:32
FARM

ORGANICS

Acetone	4.39E-15	NA	6.15E-11	4.74E-17	NA	1.86E-17	6.76E-15	NA	NA	4.39E-15
Acetonitrile	3.97E-12	NA	6.15E-11	4.74E-17	NA	1.86E-17	6.76E-15	NA	NA	6.54E-11
Acrylonitrile	1.69E-12	NA	3.41E-17	9.56E-19	NA	1.44E-19	NA	NA	NA	1.69E-12
Aldrin	6.17E-18	3.41E-17	3.41E-17	9.56E-19	NA	1.44E-19	1.05E-20	2.81E-27	1.89E-20	4.14E-17
Aniline	2.23E-13	1.93E-13	1.93E-13	8.85E-18	NA	3.47E-18	3.80E-16	2.33E-19	6.85E-16	4.17E-13
Atrazine	1.38E-15	7.08E-16	3.09E-19	3.09E-19	1.20E-19	1.20E-19	2.35E-18	0.00E+00	4.23E-18	2.10E-15
Benzaldehyde	1.02E-13	4.79E-14	7.07E-18	7.07E-18	2.77E-18	2.77E-18	1.73E-16	2.51E-20	3.12E-16	1.50E-13
Benzene	1.28E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.28E-15
Benzofuran	4.95E-13	2.56E-13	1.10E-16	1.10E-16	4.27E-17	4.27E-17	8.42E-16	5.53E-19	1.52E-15	7.53E-13
Benzoic Acid	4.98E-14	1.72E-14	5.06E-18	5.06E-18	1.98E-18	1.98E-18	8.48E-17	2.20E-20	1.53E-16	6.73E-14
Benzonitrile	1.09E-12	4.76E-13	8.17E-17	8.17E-17	3.20E-17	3.20E-17	1.85E-15	2.99E-19	3.34E-15	1.57E-12
Benzothiazole	4.64E-16	1.47E-16	5.39E-20	5.39E-20	2.11E-20	2.11E-20	7.89E-19	2.51E-24	1.42E-18	6.12E-16
Biphenyl	4.98E-13	NA	NA	NA	NA	NA	NA	NA	NA	4.98E-13
Bis(2-ethylhexyl)phthalate	2.74E-16	1.15E-15	8.03E-16	8.03E-16	9.59E-17	9.59E-17	4.65E-19	3.25E-24	8.39E-19	2.32E-15
Carbazole	2.23E-15	7.73E-16	9.15E-19	9.15E-19	3.52E-19	3.52E-19	3.80E-18	3.51E-21	6.85E-18	3.02E-15
Carbonyl Chloride	6.48E-15	NA	NA	NA	NA	NA	NA	NA	NA	6.48E-15
4-Chloroaniline	1.28E-16	3.54E-17	1.25E-20	1.25E-20	4.89E-21	4.89E-21	2.18E-19	9.45E-22	3.92E-19	1.64E-16
Chlorobenzene	3.07E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.07E-16
4-Chlorobiphenyl	3.15E-16	5.28E-17	7.30E-19	7.30E-19	2.49E-19	2.49E-19	5.36E-19	3.39E-22	9.66E-19	3.70E-16
4,4'-Chlorobiphenyl	1.59E-17	2.03E-18	9.01E-20	9.01E-20	2.63E-20	2.63E-20	2.70E-20	5.71E-24	4.86E-20	1.81E-17
Chloroethane	1.13E-14	5.51E-15	7.93E-19	7.93E-19	3.10E-19	3.10E-19	1.92E-17	1.91E-23	3.46E-17	1.69E-14
Chloroform	5.51E-14	NA	NA	NA	NA	NA	NA	NA	NA	5.51E-14
Dibenzofuran	9.93E-15	2.30E-15	9.55E-18	9.55E-18	3.55E-18	3.55E-18	1.69E-17	2.19E-20	3.05E-17	1.23E-14
Dichlorobenzenes (total)	1.28E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.28E-15
1,4-Dichlorobenzene	8.08E-17	NA	NA	NA	NA	NA	NA	NA	NA	8.08E-17
1,1-Dichloroethane	3.66E-15	NA	NA	NA	NA	NA	NA	NA	NA	3.66E-15
1,2-Dichloroethane	1.14E-15	3.76E-15	7.95E-20	7.95E-20	3.11E-20	3.11E-20	1.94E-18	5.73E-23	3.51E-18	4.91E-15
1,1-Dichloroethene	1.96E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.96E-15
1,2-Dichloroethene	1.69E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.69E-15
1,2-Dichloropropane	7.25E-16	NA	NA	NA	NA	NA	NA	NA	NA	7.25E-16
Dieldrin	1.13E-17	4.21E-16	1.71E-19	1.71E-19	4.03E-20	4.03E-20	1.93E-20	1.08E-24	3.47E-20	4.33E-16
Dimethyldisulfide	3.11E-15	NA	NA	NA	NA	NA	NA	NA	NA	3.11E-15
Hexachlorobenzene	2.99E-14	1.04E-14	1.45E-16	1.45E-16	4.39E-17	4.39E-17	5.09E-17	4.30E-19	9.18E-17	4.07E-14
Hydrazine	3.87E-11	1.43E-08	3.26E-17	3.26E-17	1.28E-17	1.28E-17	6.58E-14	3.52E-20	1.19E-13	1.43E-08
Lindane	5.26E-18	2.19E-18	2.18E-21	2.18E-21	8.38E-22	8.38E-22	8.95E-21	4.73E-26	1.61E-20	7.48E-18
Malathion	1.55E-17	2.24E-18	4.28E-21	4.28E-21	1.66E-21	1.66E-21	2.64E-20	0.00E+00	4.77E-20	1.79E-17
Methyl chloride	1.52E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.52E-15
Methylene chloride	9.17E-14	NA	NA	NA	NA	NA	NA	NA	NA	9.17E-14
Methyl ethyl ketone	1.92E-15	1.48E-14	4.09E-20	4.09E-20	1.61E-20	1.61E-20	3.27E-18	0.00E+00	5.89E-18	1.68E-14
4-Methylphenol	1.74E-15	2.38E-15	1.89E-19	1.89E-19	7.40E-20	7.40E-20	2.96E-18	2.71E-23	5.35E-18	4.13E-15
Monomethyl hydrazine	1.22E-11	1.69E-09	1.03E-17	1.03E-17	4.03E-18	4.03E-18	1.12E-20	3.74E-14	3.74E-14	1.70E-09
Naphthalene	2.06E-16	1.05E-16	8.95E-20	8.95E-20	3.44E-20	3.44E-20	3.50E-19	1.48E-19	6.31E-19	3.12E-16
Naphthalene carbonitrile	1.09E-12	5.58E-13	4.73E-16	4.73E-16	1.82E-16	1.82E-16	1.85E-15	3.42E-18	3.34E-15	1.65E-12
n-Nitrosodimethylamine	1.24E-14	3.66E-12	1.07E-19	1.07E-19	4.18E-20	4.18E-20	2.11E-17	0.00E+00	3.81E-17	3.67E-12
PAHs										
Acenaphthalene	4.95E-14	2.96E-14	4.51E-17	4.51E-17	1.68E-17	1.68E-17	8.42E-17	1.05E-20	1.52E-16	7.94E-14
Acenaphthene	4.95E-14	1.26E-14	3.85E-17	3.85E-17	1.45E-17	1.45E-17	8.42E-17	4.07E-20	1.52E-16	6.24E-14
Benzo(a)pyrene	9.95E-14	1.83E-15	2.21E-15	2.21E-15	4.77E-16	4.77E-16	1.69E-16	1.40E-19	3.05E-16	1.04E-13

TABLE 2			T	U	V	W	X	Y	Z	AA
A	B	C	9.93E-15	1.54E-15	7.71E-17	2.11E-17	1.69E-17	3.55E-19	3.05E-17	1.16E-14
61		Chrysene	9.93E-14	3.38E-15	2.56E-15	5.34E-16	1.69E-16	7.95E-17	3.05E-16	1.06E-13
62		Dibenzo(a,h)anthracene	9.93E-14	2.94E-14	3.44E-16	1.10E-16	1.69E-16	NA	3.05E-16	1.30E-13
63		Fluoranthene	9.93E-15	3.50E-15	1.26E-17	4.60E-18	1.69E-17	2.92E-20	3.05E-17	1.35E-14
64		Fluorene	3.87E-17	9.94E-18	6.09E-20	2.17E-20	6.58E-20	1.01E-19	1.19E-19	4.90E-17
65		Phenanthrene	1.99E-13	5.48E-14	6.53E-16	2.11E-16	3.38E-16	1.60E-18	6.09E-16	2.55E-13
66		Pyrene	2.46E-17	6.55E-18	1.71E-20	6.47E-21	4.19E-20	3.17E-25	7.55E-20	3.13E-17
67		Parathion	1.22E-14	8.20E-15	3.53E-17	1.17E-17	2.08E-17	NA	3.74E-17	2.05E-14
68		Pentachlorobenzene	1.95E-16	6.37E-16	1.33E-20	5.21E-21	3.32E-19	NA	5.99E-19	8.33E-16
69		Phenol	1.09E-12	NA	NA	NA	NA	NA	NA	1.09E-12
70		Pyridine	1.12E-14	1.06E-14	1.33E-18	5.19E-19	1.90E-17	6.35E-21	3.43E-17	2.18E-14
71		Quinoline	6.00E-15	9.37E-15	7.55E-18	2.75E-18	1.02E-17	NA	1.84E-17	1.54E-14
72		Tetrachlorobenzene	2.09E-16	NA	NA	NA	NA	NA	NA	2.09E-16
73		Tetrachloroethene	3.34E-15	NA	NA	NA	NA	NA	NA	3.34E-15
74		Toluene	3.04E-15	4.40E-16	2.52E-18	9.44E-19	5.16E-18	9.59E-21	9.31E-18	3.49E-15
75		Trichlorobenzene	2.23E-15	NA	NA	NA	NA	NA	NA	2.23E-15
76		Trichloroethene	4.81E-11	8.55E-09	7.68E-17	3.01E-17	8.18E-14	4.39E-20	1.48E-13	8.60E-09
77		Unsym. dimethyl hydrazine	9.73E-17	4.92E-17	6.25E-21	2.45E-21	1.65E-19	2.12E-25	2.98E-19	1.47E-16
78		Vapona	1.38E-15	NA	NA	NA	NA	NA	NA	1.38E-15
79		Vinyl acetate	1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
80		Vinyl chloride	2.38E-16	NA	NA	NA	NA	NA	NA	2.38E-16
81		Xylenes (total)								
82										
83		INORGANICS								
84		Arsenic	1.31E-12	2.47E-15	4.04E-14	5.30E-16	2.23E-15	4.36E-15	4.02E-16	1.36E-12
85		Cadmium	7.60E-15	1.30E-16	8.35E-17	3.65E-18	1.29E-17	NA	2.33E-18	7.83E-15
86		Chromium (III)	3.37E-14	NA	NA	NA	NA	NA	NA	3.37E-14
87		Chromium (VI)	1.19E-15	NA	NA	NA	NA	NA	NA	1.19E-15
88		Copper	4.98E-14	NA	NA	NA	NA	5.29E-16	NA	5.04E-14
89		Iron	1.21E-09	NA	NA	NA	NA	NA	NA	1.21E-09
90		Lead	4.91E-14	NA	NA	NA	NA	NA	NA	4.91E-14
91		Mercury	4.91E-14	1.14E-15	2.13E-16	1.60E-14	8.36E-17	NA	1.51E-17	6.66E-14
92		Selenium	1.49E-13	NA	NA	NA	NA	NA	NA	1.49E-13
93		Silver	6.80E-16	NA	NA	NA	NA	NA	NA	6.80E-16
94		Zinc	3.90E-13	NA	NA	NA	NA	2.03E-15	NA	3.92E-13

br 20 M3/day
 bw 70 Kg
 ef 365 days/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf
 D*AT*1000
 SD*BD
 AC = ER * DFI
 D = ER * X DF

A - B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2		TABLE 3							
3		ADULT TOTAL EXPOSURE - MAXIMUM							
4									
5	BASE CASE								
6									
7									
8	18-Jun-91	INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
9	15:32	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	EXPOSURE	CONSUMPTION	EXPOSURE	
10	FARM	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)	(mg/Kg/day)
11									
12	ORGANICS								
13	Acetone	4.39E-15	NA	NA	NA	NA	NA	NA	4.39E-15
14	Acetonitrile	3.97E-12	6.25E-11	4.84E-17	1.89E-17	6.86E-15	7.76E-21	1.24E-14	6.65E-11
15	Acrylonitrile	1.69E-12	NA	NA	NA	NA	NA	NA	1.69E-12
16	Aldrin	6.17E-18	3.48E-17	2.90E-17	3.29E-18	1.06E-20	2.81E-27	1.92E-20	7.33E-17
17	Aniline	2.23E-13	2.04E-13	9.30E-18	3.55E-18	3.86E-16	2.33E-19	6.95E-16	4.29E-13
18	Atrazine	1.38E-15	7.73E-16	4.33E-19	1.35E-19	2.38E-18	0.00E+00	4.29E-18	2.16E-15
19	Benzaldehyde	1.02E-13	5.26E-14	7.73E-18	2.87E-18	1.76E-16	2.51E-20	3.17E-16	1.55E-13
20	Benzene	1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
21	Benzofuran	4.95E-13	2.79E-13	1.53E-16	4.80E-17	8.54E-16	5.53E-19	1.54E-15	7.77E-13
22	Benzoic Acid	4.98E-14	1.94E-14	5.80E-18	2.08E-18	8.60E-17	2.20E-20	1.55E-16	6.95E-14
23	Benzonitrile	1.09E-12	5.26E-13	9.00E-17	3.32E-17	1.88E-15	2.59E-19	3.38E-15	1.62E-12
24	Benzothiazole	4.64E-16	1.67E-16	6.33E-20	2.23E-20	8.00E-19	2.51E-24	1.44E-18	6.33E-16
25	Biphenyl	4.98E-13	NA	NA	NA	NA	NA	NA	4.98E-13
26	Bis(2-ethylhexyl)phthalate	2.74E-16	1.18E-15	2.74E-14	3.08E-15	4.72E-19	3.25E-24	8.51E-19	3.19E-14
27	Carbazole	2.23E-15	8.73E-16	1.72E-18	4.46E-19	3.86E-18	3.31E-21	6.95E-18	3.12E-15
28	Carbon Tetrachloride	6.48E-15	NA	NA	NA	NA	NA	NA	6.48E-15
29	4-Chloroaniline	3.07E-16	4.09E-17	1.42E-20	5.13E-21	2.21E-19	9.45E-22	3.98E-19	1.70E-16
30	Chlorobenzene	3.15E-16	NA	NA	NA	NA	NA	NA	3.07E-16
31	4-Chlorobiphenyl	1.59E-17	6.61E-17	5.27E-18	7.60E-19	5.44E-19	3.39E-22	9.80E-19	3.89E-16
32	4,4'-Chlorobiphenyl	1.13E-14	2.69E-18	1.18E-18	1.49E-19	2.74E-20	5.71E-24	4.93E-20	2.00E-17
33	Chloroethane	1.13E-14	6.04E-15	8.67E-19	3.22E-19	1.95E-17	1.91E-23	3.51E-17	1.74E-14
34	Chloroform	5.51E-14	NA	NA	NA	NA	NA	NA	5.51E-14
35	Dibenzofuran	9.93E-15	2.73E-15	3.34E-17	6.25E-18	1.71E-17	2.19E-20	3.09E-17	1.28E-14
36	Dichlorobenzenes (total)	1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
37	1,4-Dichlorobenzene	8.08E-17	NA	NA	NA	NA	NA	NA	8.08E-17
38	1,1-Dichloroethane	3.66E-15	NA	NA	NA	NA	NA	NA	3.66E-15
39	1,2-Dichloroethane	1.14E-15	3.86E-15	8.69E-20	3.23E-20	1.97E-18	5.73E-23	3.56E-18	5.01E-15
40	1,1-Dichloroethene	1.96E-15	NA	NA	NA	NA	NA	NA	1.96E-15
41	1,2-Dichloroethene	1.69E-15	NA	NA	NA	NA	NA	NA	1.69E-15
42	1,2-Dichloropropane	7.25E-16	NA	NA	NA	NA	NA	NA	7.25E-16
43	Dieldrin	1.13E-17	4.28E-16	3.42E-18	4.05E-19	1.95E-20	1.08E-24	3.52E-20	4.43E-16
44	Dimethyldisulfide	3.11E-15	NA	NA	NA	NA	NA	NA	3.11E-15
45	Hexachlorobenzene	2.99E-14	1.18E-14	1.75E-15	2.24E-16	5.17E-17	4.30E-19	9.32E-17	4.38E-14
46	Hydrazine	3.87E-11	1.45E-08	3.31E-17	1.30E-17	6.68E-14	3.52E-20	1.20E-13	1.45E-08
47	Lindane	5.26E-18	4.11E-21	4.11E-21	1.06E-21	9.08E-21	4.73E-26	1.64E-20	7.72E-18
48	Malathion	1.55E-17	2.89E-18	6.52E-21	1.93E-21	2.68E-20	0.00E+00	4.84E-20	1.85E-17
49	Methyl chloride	1.52E-15	NA	NA	NA	NA	NA	NA	1.52E-15
50	Methylene chloride	9.17E-14	NA	NA	NA	NA	NA	NA	9.17E-14
51	Methyl ethyl ketone	1.92E-15	1.51E-14	4.22E-20	1.64E-20	3.31E-18	0.00E+00	5.98E-18	1.71E-14
52	4-Methylphenol	1.74E-15	2.48E-15	2.20E-19	7.82E-20	3.01E-18	2.71E-23	5.42E-18	4.24E-15
53	Monomethyl hydrazine	1.22E-11	1.71E-09	1.04E-17	4.09E-18	2.11E-14	1.12E-20	3.80E-14	1.72E-09
54	Naphthalene	2.06E-16	1.15E-16	1.74E-19	4.42E-20	3.55E-19	1.48E-19	6.40E-19	3.22E-16
55	Naphthalene carbonitrile	1.09E-12	6.09E-13	9.20E-16	2.34E-16	1.88E-15	3.42E-18	3.38E-15	1.70E-12
56	n-Nitrosodimethylamine	1.24E-14	3.72E-12	1.09E-19	4.24E-20	2.14E-17	0.00E+00	3.86E-17	3.73E-12
57	PAHs								
58	Acenaphthalene	4.95E-14	3.20E-14	1.51E-16	2.89E-17	8.54E-17	1.05E-19	1.54E-16	8.19E-14
59	Acenaphthene	4.95E-14	1.48E-14	1.14E-16	2.31E-17	8.54E-17	4.07E-20	1.54E-16	6.47E-14
60	Benzo(a)pyrene	9.93E-14	5.79E-15	4.95E-14	5.78E-15	1.71E-16	1.40E-19	3.09E-16	1.61E-13

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
61	Chrysene		9.93E-15	1.95E-15	1.19E-15	1.46E-16	1.71E-17	3.55E-19	3.09E-17	1.33E-14
62	Dibenzo(a,h)anthracene		9.93E-14	7.36E-15	5.94E-14	6.91E-15	1.71E-16	7.95E-17	3.09E-16	1.74E-13
63	Fluoranthene		9.93E-14	3.37E-14	3.33E-15	4.46E-16	1.71E-17	NA	3.09E-16	1.37E-13
64	Fluorene		9.93E-15	3.94E-15	5.59E-17	9.50E-18	1.71E-17	2.92E-20	3.09E-17	1.40E-14
65	Phenanthrene		3.87E-17	1.16E-17	3.22E-19	5.12E-20	6.68E-20	1.01E-19	1.20E-19	5.10E-17
66	Pyrene		1.99E-13	6.35E-14	6.10E-15	8.24E-16	3.43E-16	1.60E-18	6.18E-16	2.70E-13
67	Parathion		2.46E-17	7.62E-18	4.61E-20	9.78E-21	4.25E-20	3.17E-25	7.66E-20	3.24E-17
68	Pentachlorobenzene		1.22E-14	8.80E-15	3.01E-16	4.16E-17	2.11E-17	NA	3.80E-17	2.14E-14
69	Phenol		1.95E-16	6.54E-16	1.45E-20	5.40E-21	3.37E-19	NA	6.07E-19	8.50E-16
70	Pyridine		1.09E-12	NA	NA	NA	NA	NA	NA	1.09E-12
71	Quinoline		1.12E-14	1.12E-14	1.56E-18	5.50E-19	1.93E-17	6.35E-21	3.48E-17	2.24E-14
72	Tetrachlorobenzene		6.00E-15	9.74E-15	3.31E-17	5.64E-18	1.03E-17	NA	1.87E-17	1.58E-14
73	Tetrachloroethene		2.09E-16	NA	NA	NA	NA	NA	NA	2.09E-16
74	Toluene		3.34E-15	NA	NA	NA	NA	NA	NA	3.34E-15
75	Trichlorobenzene		3.04E-15	5.67E-16	7.80E-18	1.54E-18	5.24E-18	9.59E-21	9.45E-18	3.63E-15
76	Trichloroethene		2.23E-15	NA	NA	NA	NA	NA	NA	2.23E-15
77	Unsym. dimethyl hydrazine		4.81E-11	8.68E-09	7.79E-17	3.05E-17	8.30E-14	4.39E-20	1.50E-13	8.73E-09
78	Vapona		9.73E-17	5.38E-17	6.79E-21	2.53E-21	1.68E-19	2.12E-25	3.03E-19	1.52E-16
79	Vinyl acetate		1.38E-15	NA	NA	NA	NA	NA	NA	1.38E-15
80	Vinyl chloride		1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
81	Xylenes (total)		2.38E-16	NA	NA	NA	NA	NA	NA	2.38E-16
82										
83	INORGANICS									
84	Arsenic		1.31E-12	5.45E-14	2.16E-13	2.65E-15	2.26E-15	4.36E-15	4.08E-16	1.59E-12
85	Cadmium		7.60E-15	4.33E-16	2.54E-16	7.08E-18	1.31E-17	NA	2.36E-18	8.31E-15
86	Chromium (III)		3.37E-14	NA	NA	NA	NA	NA	NA	3.37E-14
87	Chromium (VI)		1.19E-15	NA	NA	NA	NA	NA	NA	1.19E-15
88	Copper		4.98E-14	NA	NA	NA	NA	5.29E-16	NA	5.04E-14
89	Iron		1.21E-09	NA	NA	NA	NA	NA	NA	1.21E-09
90	Lead		4.91E-14	NA	NA	NA	NA	NA	NA	4.91E-14
91	Mercury		4.91E-14	3.10E-15	7.08E-16	2.61E-14	8.48E-17	NA	1.53E-17	7.92E-14
92	Selenium		1.49E-13	NA	NA	NA	NA	NA	NA	1.49E-13
93	Silver		6.80E-16	NA	NA	NA	NA	NA	NA	6.80E-16
94	Zinc		3.90E-13	NA	NA	NA	NA	2.03E-15	NA	3.92E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 20 M3/day
 bw 70 Kg
 ef 365 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56
57	58	59	60							
TABLE 4										
CHILD TOTAL EXPOSURE - AVERAGE										
18-Jun-91										
15:15:32										
FARM										
BASE CASE										
ORGANICS										
13	Acetone		9.92E-15	NA	NA	NA	NA	NA	NA	9.92E-15
14	Acetonitrile		8.97E-12	1.32E-10	2.74E-16	4.64E-17	6.11E-14	1.75E-20	2.08E-14	1.41E-10
15	Acrylonitrile		3.82E-12	NA	NA	NA	NA	NA	NA	3.82E-12
16	Aldrin		1.39E-17	7.33E-17	5.52E-18	3.59E-19	9.48E-20	6.34E-27	3.23E-20	9.33E-17
17	Aniline		5.05E-13	4.11E-13	5.11E-17	8.65E-18	3.43E-15	5.27E-19	1.17E-15	9.20E-13
18	Atrazine		3.12E-15	1.52E-15	1.78E-18	3.00E-19	2.12E-17	0.00E+00	7.22E-18	4.67E-15
19	Benzaldehyde		2.30E-13	1.02E-13	4.08E-17	6.91E-18	1.56E-15	5.67E-20	5.33E-16	3.34E-13
20	Benzene		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
21	Benzofuran		1.12E-12	5.50E-13	6.34E-16	1.06E-16	7.60E-15	1.25E-18	2.59E-15	1.68E-12
22	Benzoic acid		1.13E-13	3.67E-14	2.92E-17	4.93E-18	7.66E-16	4.96E-20	2.61E-16	1.50E-13
23	Benzonitrile		2.46E-12	1.02E-12	4.72E-16	7.98E-17	1.67E-14	6.74E-19	5.69E-15	3.50E-12
24	Benothiazole		1.05E-15	3.13E-16	3.11E-19	5.26E-20	7.12E-18	5.67E-24	2.43E-18	1.37E-15
25	Biphenyl		1.13E-12	NA	NA	NA	NA	NA	NA	1.13E-12
26	Bis(2-ethylhexyl)phthalate		6.18E-16	2.47E-15	4.64E-15	2.39E-16	4.20E-18	7.34E-24	1.43E-18	7.97E-15
27	Carbazole		5.05E-15	1.66E-15	5.28E-18	8.79E-19	3.43E-17	7.46E-21	1.17E-17	6.76E-15
28	Carbon Tetrachloride		1.46E-14	NA	NA	NA	NA	NA	NA	1.46E-14
29	4-Chloroaniline		2.89E-16	7.55E-17	7.21E-20	1.22E-20	1.97E-18	2.13E-21	6.69E-19	3.67E-16
30	Chlorobenzene		6.94E-16	NA	NA	NA	NA	NA	NA	6.94E-16
31	4-Chlorobiphenyl		7.12E-16	1.13E-16	4.22E-18	6.21E-19	4.84E-18	7.66E-22	1.65E-18	8.36E-16
32	4,4-Chlorobiphenyl		3.58E-17	4.37E-18	5.20E-19	6.57E-20	2.44E-19	1.29E-23	8.30E-20	4.11E-17
33	Chloroethane		2.55E-14	1.18E-14	4.58E-18	7.74E-19	1.74E-16	4.32E-23	5.91E-17	3.75E-14
34	Chloroform		1.24E-13	NA	NA	NA	NA	NA	NA	1.24E-13
35	Dibenzofuran		2.24E-14	4.94E-15	5.51E-17	8.89E-18	1.53E-16	4.94E-20	5.20E-17	2.76E-14
36	Dichlorobenzenes (total)		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
37	1,4-Dichlorobenzene		1.83E-16	NA	NA	NA	NA	NA	NA	1.83E-16
38	1,1-Dichloroethane		8.26E-15	NA	NA	NA	NA	NA	NA	8.26E-15
39	1,2-Dichloroethane		2.58E-15	8.09E-15	4.59E-19	7.76E-20	1.76E-17	1.29E-22	5.98E-18	1.07E-14
40	1,1-Dichloroethene		4.42E-15	NA	NA	NA	NA	NA	NA	4.42E-15
41	1,2-Dichloroethene		3.83E-15	NA	NA	NA	NA	NA	NA	3.83E-15
42	1,2-Dichloropropane		1.64E-15	NA	NA	NA	NA	NA	NA	1.64E-15
43	Dieldrin		2.56E-17	9.06E-16	9.87E-19	1.00E-19	1.74E-19	2.44E-24	5.93E-20	9.33E-16
44	Dimethyldisulfide		7.03E-15	NA	NA	NA	NA	NA	NA	7.03E-15
45	Hexachlorobenzene		6.76E-14	2.25E-14	8.40E-16	1.09E-16	4.60E-16	9.71E-19	1.57E-16	9.16E-14
46	Hydrazine		8.74E-11	3.06E-08	1.88E-16	3.19E-17	5.94E-13	7.96E-20	2.02E-13	3.07E-08
47	Lindane		1.19E-17	4.70E-18	1.26E-20	2.09E-21	8.09E-20	1.07E-25	2.75E-20	1.67E-17
48	Malathion		3.51E-17	4.80E-18	2.47E-20	4.14E-21	2.39E-19	0.00E+00	8.13E-20	4.03E-17
49	Methyl chloride		3.43E-15	NA	NA	NA	NA	NA	NA	3.43E-15
50	Methylene chloride		2.07E-13	NA	NA	NA	NA	NA	NA	2.07E-13
51	Methyl ethyl ketone		4.34E-15	3.18E-14	2.36E-19	4.00E-20	2.95E-17	0.00E+00	1.00E-17	3.62E-14
52	4-Methylphenol		3.94E-15	5.11E-15	1.09E-17	1.85E-19	2.68E-17	6.13E-23	9.12E-18	9.08E-15
53	Monomethyl hydrazine		2.75E-11	3.59E-09	5.94E-17	1.01E-17	1.87E-13	2.52E-20	6.38E-14	3.62E-09
54	Naphthalene		4.64E-16	2.27E-16	5.17E-19	8.58E-20	3.16E-18	3.35E-19	1.08E-18	6.96E-16
55	Naphthalene carbonitrile		2.46E-12	1.20E-12	2.73E-15	4.54E-16	1.67E-14	7.72E-18	5.69E-15	3.68E-12
56	n-Nitrosodimethylamine		2.80E-14	7.87E-12	6.15E-19	1.04E-19	1.91E-16	0.00E+00	6.49E-17	7.90E-12
57	PAHS									
58	Acenaphthalene		1.12E-13	6.36E-14	2.60E-16	4.20E-17	7.60E-16	2.37E-19	2.59E-16	1.77E-13
59	Acenaphthene		1.12E-13	2.72E-14	2.22E-16	3.62E-17	7.60E-16	9.18E-20	2.59E-16	1.40E-13
60	Benzo(a)pyrene		2.24E-13	3.89E-15	1.28E-14	1.19E-15	1.53E-15	3.17E-19	5.20E-16	2.44E-13

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
61	Chrysene		2.24E-14	3.30E-15	4.45E-16	5.26E-17	1.53E-16	8.01E-19	5.20E-17	2.64E-14
62	Dibenzo(a,h)anthracene		2.24E-13	7.23E-15	1.48E-14	1.33E-15	1.53E-15	1.79E-16	5.20E-16	2.50E-13
63	Fluoranthene		2.24E-13	6.31E-14	1.99E-15	2.73E-16	1.53E-15	NA	5.20E-16	2.92E-13
64	Fluorene		2.24E-14	7.52E-15	7.30E-17	1.15E-17	1.53E-16	6.60E-20	5.20E-17	3.02E-14
65	Phenanthrene		8.74E-17	2.14E-17	3.52E-19	5.42E-20	5.94E-19	2.27E-19	2.02E-19	1.10E-16
66	Pyrene		4.49E-13	1.18E-13	3.77E-15	5.27E-16	3.05E-15	3.62E-18	1.04E-15	5.75E-13
67	Parathion		5.56E-17	1.41E-17	9.87E-20	1.61E-20	3.78E-19	7.17E-25	1.29E-19	7.03E-17
68	Pentachlorobenzene		2.75E-14	1.76E-14	2.94E-16	2.91E-17	1.87E-16	NA	6.38E-17	4.57E-14
69	Phenol		4.41E-16	1.37E-15	7.68E-20	1.30E-20	3.00E-18	NA	1.02E-18	1.81E-15
70	Pyridine		2.46E-12	NA	NA	NA	NA	NA	NA	2.46E-12
71	Quinoline		2.53E-14	2.27E-14	7.66E-18	1.29E-18	1.72E-16	1.43E-20	5.85E-17	4.82E-14
72	Tetrachlorobenzene		1.35E-14	2.01E-14	4.36E-17	6.86E-18	9.21E-17	NA	3.14E-17	3.39E-14
73	Tetrachloroethene		4.73E-16	NA	NA	NA	NA	NA	NA	4.73E-16
74	Toluene		7.54E-15	NA	NA	NA	NA	NA	NA	7.54E-15
75	Trichlorobenzene		6.86E-15	9.44E-16	1.45E-17	2.35E-18	4.66E-17	2.17E-20	1.59E-17	7.88E-15
76	Trichloroethene		5.05E-15	NA	NA	NA	NA	NA	NA	5.05E-15
77	Unsym. dimethyl hydrazine		1.09E-10	1.83E-08	4.43E-16	7.51E-17	7.39E-13	9.92E-20	2.52E-13	1.85E-08
78	Vapona		2.20E-16	1.05E-16	3.61E-20	6.11E-21	1.49E-18	4.78E-25	5.09E-19	3.27E-16
79	Vinyl acetate		3.12E-15	NA	NA	NA	NA	NA	NA	3.12E-15
80	Vinyl chloride		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
81	Xylenes (total)		5.38E-16	NA	NA	NA	NA	NA	NA	5.38E-16
82										
83	INORGANICS									
84	Arsenic		2.96E-12	4.51E-15	2.34E-13	1.32E-15	2.01E-14	9.84E-15	6.86E-16	3.23E-12
85	Cadmium		1.72E-14	2.52E-16	4.82E-16	9.11E-18	1.17E-16	NA	3.98E-18	1.80E-14
86	Chromium (III)		7.60E-14	NA	NA	NA	NA	NA	NA	7.60E-14
87	Chromium (VI)		2.68E-15	NA	NA	NA	NA	NA	NA	2.68E-15
88	Copper		1.13E-13	NA	NA	NA	NA	1.20E-15	NA	1.14E-13
89	Iron		2.73E-09	NA	NA	NA	NA	NA	NA	2.73E-09
90	Lead		1.11E-13	NA	NA	NA	NA	NA	NA	1.11E-13
91	Mercury		1.11E-13	2.15E-15	1.23E-15	3.98E-14	7.55E-16	NA	2.57E-17	1.55E-13
92	Selenium		3.36E-13	NA	NA	NA	NA	NA	NA	3.36E-13
93	Silver		1.53E-15	NA	NA	NA	NA	NA	NA	1.53E-15
94	Zinc		8.82E-13	NA	NA	NA	NA	4.58E-15	NA	8.86E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2			TABLE 5							
3			CHILD TOTAL EXPOSURE - MAXIMUM							
4										
5										
6										
7										
8										
9										
10										
11										
12	ORGANICS									
13	Acetone		9.92E-15	NA	2.80E-16	NA	NA	NA	NA	9.92E-15
14	Acetonitrile		8.97E-12	1.34E-10	NA	4.71E-17	6.19E-14	1.75E-20	2.11E-14	1.43E-10
15	Acrylonitrile		3.82E-12	NA	NA	NA	NA	NA	NA	3.82E-12
16	Aldrin		1.39E-17	7.48E-17	1.67E-16	8.20E-18	9.62E-20	6.34E-27	3.28E-20	2.65E-16
17	Aniline		5.05E-13	4.33E-13	5.37E-17	8.87E-18	3.48E-15	5.27E-19	1.19E-15	9.43E-13
18	Atrazine		3.12E-15	1.64E-15	2.50E-18	3.38E-19	2.15E-17	0.00E+00	7.33E-18	4.79E-15
19	Benzaldehyde		2.30E-13	1.11E-13	4.47E-17	7.16E-18	1.59E-15	5.67E-20	5.40E-16	3.43E-13
20	Benzene		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
21	Benzofuran		1.12E-12	5.94E-13	8.85E-16	1.20E-16	7.71E-15	1.25E-18	2.63E-15	1.72E-12
22	Benzoic Acid		1.13E-13	4.09E-14	3.35E-17	5.19E-18	7.77E-16	4.96E-20	2.65E-16	1.55E-13
23	Benzonitrile		2.46E-12	1.11E-12	5.20E-16	8.29E-17	1.70E-14	6.74E-19	5.77E-15	3.59E-12
24	Benzothiazole		1.05E-15	3.52E-16	3.65E-19	5.57E-20	7.23E-18	5.67E-24	2.46E-18	1.41E-15
25	Biphenyl		1.13E-12	NA	NA	NA	NA	NA	NA	1.13E-12
26	Bis(2-ethylhexyl)phthalate		6.18E-16	2.52E-15	1.58E-13	7.67E-15	4.26E-18	7.34E-24	1.45E-18	1.69E-13
27	Carbazole		5.05E-15	1.85E-15	9.91E-18	1.11E-18	3.48E-17	7.46E-21	1.19E-17	6.95E-15
28	Carbon Tetrachloride		1.46E-14	NA	NA	NA	NA	NA	NA	1.46E-14
29	4-Chloroaniline		2.89E-16	8.60E-17	8.22E-20	1.28E-20	1.99E-18	2.13E-21	6.79E-19	3.78E-16
30	Chlorobenzene		6.94E-16	NA	NA	NA	NA	NA	NA	6.94E-16
31	4-Chlorobiphenyl		7.12E-16	1.38E-16	3.04E-17	1.90E-18	4.91E-18	7.66E-22	1.67E-18	8.89E-16
32	4,4'-Chlorobiphenyl		3.58E-17	5.60E-18	6.82E-18	3.71E-19	2.47E-19	1.29E-23	8.42E-20	4.89E-17
33	Chloroethane		2.55E-14	1.28E-14	5.01E-18	8.03E-19	1.76E-16	4.32E-23	6.00E-17	3.85E-14
34	Chloroform		1.24E-13	NA	NA	NA	NA	NA	NA	1.24E-13
35	Dibenzofuran		2.24E-14	5.75E-15	1.93E-16	1.56E-17	1.55E-16	4.94E-20	5.27E-17	2.86E-14
36	Dichlorobenzenes (total)		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
37	1,4-Dichlorobenzene		1.83E-16	NA	NA	NA	NA	NA	NA	1.83E-16
38	1,1-Dichloroethane		8.26E-15	NA	NA	NA	NA	NA	NA	8.26E-15
39	1,2-Dichloroethane		2.58E-15	8.29E-15	5.02E-19	8.05E-20	1.78E-17	1.29E-22	6.07E-18	1.09E-14
40	1,1-Dichloroethene		4.42E-15	NA	NA	NA	NA	NA	NA	4.42E-15
41	1,2-Dichloroethene		3.83E-15	NA	NA	NA	NA	NA	NA	3.83E-15
42	1,2-Dichloropropane		1.64E-15	NA	NA	NA	NA	NA	NA	1.64E-15
43	Dieldrin		2.56E-17	9.20E-16	1.98E-17	1.01E-18	1.77E-19	2.44E-24	6.01E-20	9.66E-16
44	Dimethyldisulfide		7.03E-15	NA	NA	NA	NA	NA	NA	7.03E-15
45	Hexachlorobenzene		6.76E-14	2.50E-14	1.01E-14	5.58E-16	4.67E-16	9.71E-19	1.59E-16	1.04E-13
46	Hydrazine		8.74E-11	3.11E-08	1.91E-16	3.24E-17	6.03E-13	7.96E-20	2.05E-13	3.12E-08
47	Lindane		1.19E-17	5.15E-18	2.37E-20	2.65E-21	8.20E-20	1.07E-25	2.79E-17	1.72E-17
48	Malathion		3.51E-17	6.01E-18	3.77E-20	4.81E-21	2.42E-19	0.00E+00	8.25E-20	4.15E-17
49	Methyl chloride		3.43E-15	NA	NA	NA	NA	NA	NA	3.43E-15
50	Methylene chloride		2.07E-13	NA	NA	NA	NA	NA	NA	2.07E-13
51	Methyl ethyl ketone		4.34E-15	3.24E-14	2.44E-19	4.08E-20	2.99E-17	0.00E+00	1.02E-17	3.68E-14
52	4-Methylphenol		3.94E-15	5.31E-15	1.27E-18	1.95E-19	2.72E-17	6.13E-23	9.25E-18	9.29E-15
53	Monomethyl hydrazine		2.75E-11	3.64E-09	6.03E-17	1.02E-17	1.90E-13	2.52E-20	6.48E-14	3.67E-09
54	Naphthalene		4.64E-16	2.45E-16	1.00E-18	1.10E-19	3.21E-18	3.35E-19	1.09E-18	7.15E-16
55	Naphthalene carbonitrile		2.46E-12	1.30E-12	5.31E-15	5.83E-16	1.70E-14	7.72E-18	5.77E-15	3.78E-12
56	n-Nitrosodimethylamine		2.80E-14	7.99E-12	6.27E-19	1.06E-19	1.93E-16	0.00E+00	6.59E-17	8.02E-12
57	PAHS									
58	Acenaphthalene		1.12E-13	6.81E-14	8.72E-16	7.20E-17	7.71E-16	2.37E-19	2.63E-16	1.82E-13
59	Acenaphthene		1.12E-13	3.12E-14	6.56E-16	5.75E-17	7.71E-16	9.18E-20	2.63E-16	1.45E-13
60	Benzo(a)pyrene		2.24E-13	1.13E-14	2.86E-13	1.44E-14	1.55E-15	3.17E-19	5.27E-16	5.38E-13

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2			TABLE 5							
61	Chrysene		2.24E-14	4.08E-15	6.85E-15	3.63E-16	1.55E-16	8.01E-19	5.27E-17	3.39E-14
62	Dibenzo(a,h)anthracene		2.24E-13	1.46E-14	3.43E-13	1.72E-14	1.55E-15	1.79E-16	5.27E-16	6.01E-13
63	Fluoranthene		2.24E-13	7.14E-14	1.92E-14	1.11E-15	1.55E-15	NA	5.27E-16	3.18E-13
64	Fluorene		2.24E-14	8.36E-15	3.23E-16	2.37E-17	1.55E-16	6.60E-20	5.27E-17	3.13E-14
65	Phenanthrene		8.74E-17	2.45E-17	1.86E-18	1.28E-19	6.03E-19	2.27E-19	2.05E-19	1.15E-16
66	Pyrene		4.47E-13	1.34E-13	3.52E-14	2.05E-15	3.10E-15	3.62E-18	1.05E-15	6.24E-13
67	Parathion		5.56E-17	1.61E-17	2.66E-19	2.44E-20	3.84E-19	7.17E-25	1.31E-19	7.25E-17
68	Pentachlorobenzene		2.75E-14	1.88E-14	1.74E-15	1.04E-16	1.90E-16	NA	6.48E-17	4.84E-14
69	Phenol		4.41E-16	1.40E-15	8.38E-20	1.35E-20	3.04E-18	NA	1.04E-18	1.85E-15
70	Pyridine		2.46E-12	NA	NA	NA	NA	NA	NA	2.46E-12
71	Quinoline		2.53E-14	2.39E-14	9.03E-18	1.37E-18	1.74E-16	1.43E-20	5.94E-17	4.94E-14
72	Tetrachlorobenzene		1.35E-14	2.09E-14	1.91E-16	1.41E-17	9.34E-17	NA	3.18E-17	3.47E-14
73	Tetrachloroethene		4.73E-16	NA	NA	NA	NA	NA	NA	4.73E-16
74	Toluene		7.54E-15	NA	NA	NA	NA	NA	NA	7.54E-15
75	Trichlorobenzene		6.86E-15	1.18E-15	4.50E-17	3.85E-18	4.73E-17	2.17E-20	1.61E-17	8.15E-15
76	Trichloroethene		5.05E-15	NA	NA	NA	NA	NA	NA	5.05E-15
77	Unsym. dimethyl hydrazine		1.09E-10	1.86E-08	4.50E-16	7.62E-17	7.50E-13	9.92E-20	2.55E-13	1.87E-08
78	Vapona		2.20E-16	1.14E-16	3.92E-20	6.32E-21	1.52E-18	4.78E-25	5.16E-19	3.35E-16
79	Vinyl acetate		3.12E-15	NA	NA	NA	NA	NA	NA	3.12E-15
80	Vinyl chloride		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
81	Xylenes (total)		5.38E-16	NA	NA	NA	NA	NA	NA	5.38E-16
82										
83	INORGANICS									
84	Arsenic		2.96E-12	1.01E-13	1.25E-12	6.61E-15	2.04E-14	9.84E-15	6.96E-16	4.35E-12
85	Cadmium		1.72E-14	8.14E-16	1.47E-15	1.76E-17	1.18E-16	NA	4.03E-18	1.96E-14
86	Chromium (III)		7.60E-14	NA	NA	NA	NA	NA	NA	7.60E-14
87	Chromium (VI)		2.68E-15	NA	NA	NA	NA	NA	NA	2.68E-15
88	Copper		1.13E-13	NA	NA	NA	NA	1.20E-15	NA	2.68E-15
89	Iron		2.73E-09	NA	NA	NA	NA	NA	NA	2.73E-09
90	Lead		1.11E-13	NA	NA	NA	NA	NA	NA	1.11E-13
91	Mercury		1.11E-13	5.80E-15	4.09E-15	6.51E-14	7.66E-16	NA	2.61E-17	1.87E-13
92	Selenium		3.36E-13	NA	NA	NA	NA	NA	NA	3.36E-13
93	Silver		1.53E-15	NA	NA	NA	NA	NA	NA	1.53E-15
94	Zinc		8.82E-13	NA	NA	NA	NA	4.58E-15	NA	8.82E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 kg
um 1000 ug/mg

Inhalation dose = Cair*br/bw/ugmg

A	B	C	BH	BI	BJ
2	3	4	5	6	7
8	9	10	11	12	13
14	15	16	17	18	19
20	21	22	23	24	25
26	27	28	29	30	31
32	33	34	35	36	37
38	39	40	41	42	43
44	45	46	47	48	49
50	51	52	53	54	55
56	57	58	59	60	
BASE CASE	TABLE 6	INFANT TOTAL EXPOSURE	MAXIMUM	BREAST MILK	TOTAL
	18-Jun-91	INHALATION	(mg/kg/day)	(mg/kg/day)	(mg/kg/day)
	15:15:32	(mg/kg/day)			
	FARM				
ORGANICS					
Acetone	6.49E-15	1.13E-16	6.60E-15		
Acetonitrile	5.87E-12	2.42E-10	2.48E-10		
Acrylonitrile	2.50E-12	7.71E-15	2.51E-12		
Aldrin	9.12E-18	2.67E-16	2.76E-16		
Aniline	3.30E-13	1.56E-12	1.89E-12		
Atrazine	2.04E-15	7.86E-15	9.90E-15		
Benzaldehyde	1.50E-13	5.64E-13	7.14E-13		
Benzene	1.89E-15	2.19E-18	1.89E-15		
Benzofuran	7.31E-13	2.83E-12	3.56E-12		
Benzoic Acid	7.37E-14	2.53E-13	3.27E-13		
Benzonitrile	1.61E-12	5.89E-12	7.50E-12		
Benzothiazole	6.85E-16	2.30E-15	2.99E-15		
Biphenyl	7.37E-13	1.28E-14	7.49E-13		
Bis(2-ethylhexyl)phthalate	4.04E-16	1.16E-13	1.17E-13		
Carbazole	3.30E-15	1.14E-14	1.47E-14		
Carbon Tetrachloride	9.58E-15	1.66E-16	9.75E-15		
4-Chloroaniline	1.89E-16	6.17E-16	8.06E-16		
Chlorobenzene	4.54E-16	7.89E-18	4.62E-16		
4-Chlorobiphenyl	4.66E-16	1.41E-15	1.88E-15		
4,4'-Chlorobiphenyl	2.34E-17	7.26E-17	9.61E-17		
Chloroethane	1.67E-14	6.33E-14	8.00E-14		
Chloroform	8.14E-14	1.41E-15	8.28E-14		
Dibenzofuran	1.47E-14	4.64E-14	6.11E-14		
Dichlorobenzenes (total)	1.89E-15	3.28E-17	1.92E-15		
1,4-Dichlorobenzene	1.19E-16	2.07E-18	1.22E-16		
1,1-Dichloroethane	5.41E-15	9.39E-17	5.50E-15		
1,2-Dichloroethane	1.69E-15	1.82E-14	1.99E-14		
1,1-Dichloroethene	2.89E-15	5.03E-17	2.95E-15		
1,2-Dichloroethene	2.50E-15	4.35E-17	2.55E-15		
1,2-Dichloropropane	1.07E-15	1.86E-17	1.09E-15		
Dieldrin	1.67E-17	1.61E-15	1.63E-15		
Dimethyldisulfide	4.60E-15	7.99E-17	4.68E-15		
Hexachlorobenzene	4.42E-14	3.60E-14	8.02E-14		
Hydrazine	5.72E-11	5.29E-08	5.30E-08		
Lindane	7.78E-18	2.81E-17	3.59E-17		
Malathion	2.30E-17	6.74E-17	9.04E-17		
Methyl chloride	2.25E-15	3.90E-17	2.28E-15		
Methylene chloride	1.35E-13	2.35E-15	1.38E-13		
Methyl ethyl ketone	2.84E-15	6.21E-14	6.49E-14		
4-Methylphenol	2.58E-15	1.54E-14	1.80E-14		
Monomethyl hydrazine	1.80E-11	6.27E-09	6.29E-09		
Naphthalene	3.04E-16	1.17E-15	1.48E-15		
Naphthalene carbonitrile	1.61E-12	6.20E-12	7.80E-12		
n-Nitrosodimethylamine	1.83E-14	1.36E-11	1.36E-11		
PAHs					
Acenaphthalene	7.31E-14	2.98E-13	3.71E-13		
Acenaphthene	7.31E-14	2.35E-13	3.08E-13		
Benzo(a)pyrene	1.47E-13	5.86E-13	7.32E-13		

A	B	C	BH	BI	BJ
2			TABLE 6		
61	Chrysene		1.47E-14	4.83E-14	6.30E-14
62	Dibenzo(a,h)anthracene		1.47E-13	6.32E-13	7.79E-13
63	Fluoranthene		1.47E-13	5.00E-13	6.47E-13
64	Fluorene		1.47E-14	5.09E-14	6.56E-14
65	Phenanthrene		5.72E-17	1.86E-16	2.43E-16
66	Pyrene		2.94E-13	9.83E-13	1.28E-12
67	Parathion		3.64E-17	1.18E-16	1.54E-16
68	Pentachlorobenzene		1.80E-14	1.76E-14	3.56E-14
69	Phenol		2.88E-16	3.09E-15	3.38E-15
70	Pyridine		1.61E-12	2.79E-14	1.64E-12
71	Quinoline		1.65E-14	8.16E-14	9.82E-14
72	Tetrachlorobenzene		8.86E-15	1.30E-14	2.18E-14
73	Tetrachloroethene		3.10E-16	5.37E-18	3.15E-16
74	Toluene		4.93E-15	1.43E-17	4.95E-15
75	Trichlorobenzene		4.49E-15	2.98E-15	7.46E-15
76	Trichloroethene		3.30E-15	5.73E-17	3.36E-15
77	Unsym. dimethyl hydrazine		7.11E-11	3.18E-08	3.18E-08
78	Vapona		1.44E-16	5.51E-16	6.95E-16
79	Vinyl acetate		2.04E-15	3.54E-17	2.08E-15
80	Vinyl chloride		1.89E-15	3.28E-17	1.92E-15
81	Xylenes (total)		3.52E-16	2.04E-19	3.53E-16

82	INORGANICS				
83	Arsenic		1.94E-12	NE	1.94E-12
84	Cadmium		1.12E-14	NE	1.12E-14
85	Chromium (III)		4.98E-14	NE	4.98E-14
86	Chromium (VI)		1.75E-15	NE	1.75E-15
87	Copper		7.37E-14	NE	7.37E-14
88	Iron		1.79E-09	NE	1.79E-09
89	Lead		7.26E-14	NE	7.26E-14
90	Mercury		7.26E-14	NE	7.26E-14
91	Selenium		2.20E-13	NE	2.20E-13
92	Silver		1.00E-15	NE	1.00E-15
93	Zinc		5.77E-13	NE	5.77E-13

br 3.80E+00 M3/day
bw 9.00E+00 Kg
um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	BL	BM	BN	BO	BP	BQ	BR
2			TABLE 7						
3									
4									
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MOTHER'S MILK PATHWAY

18-Jun-91
15:15:32
FARM
Daily Intake (mg/kg/day)

DI	DI	DI	DI	DI	DI	DI	DI	DI	DI
Acetone	4.39E-15	4.39E-15	2.89E-01	1.27E-15	1.27E-15	1.27E-15	1.27E-15	1.13E-16	1.13E-16
Acetonitrile	6.54E-11	6.54E-11	4.09E+01	2.68E-09	2.68E-09	2.68E-09	2.68E-09	2.42E-10	2.42E-10
Acrylonitrile	1.69E-12	1.69E-12	5.13E-02	8.67E-14	8.67E-14	8.67E-14	8.67E-14	7.71E-15	7.71E-15
Aldrin	4.14E-17	4.14E-17	4.09E+01	1.69E-15	1.69E-15	1.69E-15	1.69E-15	2.67E-16	2.67E-16
Aniline	4.17E-13	4.17E-13	4.09E+01	1.71E-11	1.71E-11	1.71E-11	1.71E-11	1.52E-12	1.52E-12
Atrazine	2.10E-15	2.10E-15	4.09E+01	8.58E-14	8.58E-14	8.58E-14	8.58E-14	7.86E-15	7.86E-15
Benzaldehyde	1.50E-13	1.50E-13	4.09E+01	6.15E-12	6.15E-12	6.15E-12	6.15E-12	5.64E-13	5.64E-13
Benzene	1.28E-15	1.28E-15	1.92E-02	2.46E-17	2.46E-17	2.46E-17	2.46E-17	2.19E-18	2.19E-18
Benzo(a)pyrene	7.77E-13	7.77E-13	4.09E+01	3.08E-11	3.08E-11	3.08E-11	3.08E-11	2.74E-12	2.74E-12
Benzoic Acid	6.95E-14	6.95E-14	4.09E+01	2.75E-12	2.75E-12	2.75E-12	2.75E-12	2.53E-13	2.53E-13
Benzonitrile	1.57E-12	1.57E-12	4.09E+01	6.42E-11	6.42E-11	6.42E-11	6.42E-11	5.71E-12	5.71E-12
Benzothiazole	6.12E-16	6.12E-16	4.09E+01	2.51E-14	2.51E-14	2.51E-14	2.51E-14	2.23E-15	2.23E-15
Biphenyl	4.98E-13	4.98E-13	2.89E-01	1.44E-13	1.44E-13	1.44E-13	1.44E-13	1.28E-14	1.28E-14
Bis(2-ethylhexyl)phthalate	2.32E-15	2.32E-15	4.09E+01	9.50E-14	9.50E-14	9.50E-14	9.50E-14	8.45E-15	8.45E-15
Carbazole	3.02E-15	3.02E-15	4.09E+01	1.24E-13	1.24E-13	1.24E-13	1.24E-13	1.10E-14	1.10E-14
Carbon Tetrachloride	6.48E-15	6.48E-15	2.89E-01	1.87E-15	1.87E-15	1.87E-15	1.87E-15	1.66E-16	1.66E-16
4-Chloroaniline	1.64E-16	1.64E-16	4.09E+01	6.71E-15	6.71E-15	6.71E-15	6.71E-15	5.97E-16	5.97E-16
Chlorobenzene	3.07E-16	3.07E-16	2.89E-01	8.87E-17	8.87E-17	8.87E-17	8.87E-17	7.89E-18	7.89E-18
4-Chlorobiphenyl	3.70E-16	3.70E-16	4.09E+01	1.52E-14	1.52E-14	1.52E-14	1.52E-14	1.35E-15	1.35E-15
4,4'-Chlorobiphenyl	2.00E-17	2.00E-17	4.09E+01	7.40E-16	7.40E-16	7.40E-16	7.40E-16	6.58E-17	6.58E-17
Chloroethane	1.69E-14	1.69E-14	4.09E+01	6.90E-13	6.90E-13	6.90E-13	6.90E-13	6.14E-14	6.14E-14
Chloroform	5.51E-14	5.51E-14	2.89E-01	1.59E-14	1.59E-14	1.59E-14	1.59E-14	1.41E-15	1.41E-15
Dibenzofuran	1.23E-14	1.23E-14	4.09E+01	5.03E-13	5.03E-13	5.03E-13	5.03E-13	4.47E-14	4.47E-14
Dichlorobenzene (total)	1.28E-15	1.28E-15	2.89E-01	3.69E-16	3.69E-16	3.69E-16	3.69E-16	3.28E-17	3.28E-17
1,4-Dichlorobenzene	8.08E-17	8.08E-17	2.89E-01	2.33E-17	2.33E-17	2.33E-17	2.33E-17	2.07E-18	2.07E-18
1,1-Dichloroethane	3.66E-15	3.66E-15	2.89E-01	1.06E-15	1.06E-15	1.06E-15	1.06E-15	9.39E-17	9.39E-17
1,2-Dichloroethane	4.91E-15	4.91E-15	4.09E+01	2.01E-13	2.01E-13	2.01E-13	2.01E-13	1.79E-14	1.79E-14
1,1-Dichloroethene	1.96E-15	1.96E-15	2.89E-01	5.65E-16	5.65E-16	5.65E-16	5.65E-16	5.03E-17	5.03E-17
1,2-Dichloroethene	1.69E-15	1.69E-15	2.89E-01	4.89E-16	4.89E-16	4.89E-16	4.89E-16	4.35E-17	4.35E-17
1,2-Dichloropropane	7.25E-16	7.25E-16	2.89E-01	2.09E-16	2.09E-16	2.09E-16	2.09E-16	1.86E-17	1.86E-17
Dieldrin	4.33E-16	4.33E-16	4.09E+01	1.77E-14	1.77E-14	1.77E-14	1.77E-14	1.58E-15	1.58E-15
Dimethyldisulfide	3.11E-15	3.11E-15	2.89E-01	8.98E-16	8.98E-16	8.98E-16	8.98E-16	7.99E-17	7.99E-17
Hexachlorobenzene	4.07E-14	4.07E-14	9.24E+00	3.78E-13	3.78E-13	3.78E-13	3.78E-13	3.34E-14	3.34E-14
Hydrazine	1.43E-08	1.43E-08	4.09E+01	5.87E-07	5.87E-07	5.87E-07	5.87E-07	5.22E-08	5.22E-08
Lindane	7.48E-18	7.48E-18	4.09E+01	3.06E-16	3.06E-16	3.06E-16	3.06E-16	2.72E-17	2.72E-17
Malathion	1.79E-17	1.79E-17	4.09E+01	7.32E-16	7.32E-16	7.32E-16	7.32E-16	6.50E-17	6.50E-17
Methyl chloride	1.52E-15	1.52E-15	2.89E-01	4.39E-16	4.39E-16	4.39E-16	4.39E-16	3.90E-17	3.90E-17
Methylene chloride	9.17E-14	9.17E-14	2.89E-01	2.65E-14	2.65E-14	2.65E-14	2.65E-14	2.35E-15	2.35E-15
Methyl ethyl ketone	1.68E-14	1.68E-14	4.09E+01	6.86E-13	6.86E-13	6.86E-13	6.86E-13	6.10E-14	6.10E-14
4-Methylphenol	4.13E-15	4.13E-15	4.09E+01	1.69E-13	1.69E-13	1.69E-13	1.69E-13	1.50E-14	1.50E-14
Monomethyl hydrazine	1.70E-09	1.70E-09	4.09E+01	6.95E-08	6.95E-08	6.95E-08	6.95E-08	6.18E-09	6.18E-09
Naphthalene	3.12E-16	3.12E-16	4.09E+01	1.28E-14	1.28E-14	1.28E-14	1.28E-14	1.14E-15	1.14E-15
Naphthalene carbonitrile	1.65E-12	1.65E-12	4.09E+01	6.70E-11	6.70E-11	6.70E-11	6.70E-11	6.01E-12	6.01E-12
n-Nitrosodimethylamine	3.67E-12	3.67E-12	4.09E+01	1.50E-10	1.50E-10	1.50E-10	1.50E-10	1.34E-11	1.34E-11
PAHs									
Acenaphthalene	7.94E-14	7.94E-14	4.09E+01	3.25E-12	3.25E-12	3.25E-12	3.25E-12	2.89E-13	2.89E-13
Acenaphthene	6.24E-14	6.24E-14	4.09E+01	2.56E-12	2.56E-12	2.56E-12	2.56E-12	2.27E-13	2.27E-13
Benzo(a)pyrene	1.04E-13	1.04E-13	4.09E+01	4.27E-12	4.27E-12	4.27E-12	4.27E-12	3.80E-13	3.80E-13

A	B	C	BL	BM	BN	BO	BP	BQ	BR
TABLE 7									
61	Chrysene		1.16E-14	1.33E-14	4.09E+01	4.76E-13	5.43E-13	4.23E-14	4.83E-14
62	Dibenzo(a,h)anthracene		1.06E-13	1.74E-13	4.09E+01	4.35E-12	7.11E-12	3.87E-13	6.32E-13
63	Fluoranthene		1.30E-13	1.37E-13	4.09E+01	5.31E-12	5.62E-12	4.72E-13	5.00E-13
64	Fluorene		1.35E-14	1.40E-14	4.09E+01	5.53E-13	5.73E-13	4.91E-14	5.09E-14
65	Phenanthrene		4.90E-17	5.10E-17	4.09E+01	2.01E-15	2.09E-15	1.78E-16	1.86E-16
66	Pyrene		2.55E-13	2.70E-13	4.09E+01	1.05E-11	1.11E-11	9.29E-13	9.83E-13
67	Parathion		3.13E-17	3.24E-17	4.09E+01	1.28E-15	1.33E-15	1.14E-16	1.18E-16
68	Pentachlorobenzene		2.05E-14	2.14E-14	9.24E+00	1.89E-13	1.98E-13	1.68E-14	1.76E-14
69	Phenol		8.33E-16	8.50E-16	4.09E+01	3.41E-14	3.48E-14	3.03E-15	3.09E-15
70	Pyridine		1.09E-12	1.09E-12	2.89E-01	3.14E-13	3.14E-13	2.79E-14	2.79E-14
71	Quinoline		2.18E-14	2.24E-14	4.09E+01	8.94E-13	9.18E-13	7.95E-14	8.16E-14
72	Tetrachlorobenzene		1.54E-14	1.58E-14	9.24E+00	1.42E-13	1.46E-13	1.26E-14	1.30E-14
73	Tetrachloroethene		2.09E-16	2.09E-16	2.89E-01	6.05E-17	6.05E-17	5.37E-18	5.37E-18
74	Toluene		3.34E-15	3.34E-15	4.81E-02	1.61E-16	1.61E-16	1.43E-17	1.43E-17
75	Trichlorobenzene		3.49E-15	3.63E-15	9.24E+00	3.23E-14	3.35E-14	2.87E-15	2.98E-15
76	Trichloroethene		2.23E-15	2.23E-15	2.89E-01	6.45E-16	6.45E-16	5.73E-17	5.73E-17
77	Unsym. dimethyl hydrazine		8.60E-09	8.73E-09	4.09E+01	3.52E-07	3.57E-07	3.13E-08	3.18E-08
78	Vapona		1.47E-16	1.52E-16	4.09E+01	6.02E-15	6.20E-15	5.35E-16	5.51E-16
79	Vinyl acetate		1.38E-15	1.38E-15	2.89E-01	3.98E-16	3.98E-16	3.54E-17	3.54E-17
80	Vinyl chloride		1.28E-15	1.28E-15	2.89E-01	3.69E-16	3.69E-16	3.28E-17	3.28E-17
81	Xylenes (total)		2.38E-16	2.38E-16	9.62E-03	2.29E-18	2.29E-18	2.04E-19	2.04E-19
82									
83	INORGANICS								
84	Arsenic		1.36E-12	1.59E-12	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
85	Cadmium		7.83E-15	8.31E-15	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
86	Chromium (III)		3.37E-14	3.37E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
87	Chromium (VI)		1.19E-15	1.19E-15	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
88	Copper		5.04E-14	5.04E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
89	Iron		1.21E-09	1.21E-09	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
90	Lead		4.91E-14	4.91E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
91	Mercury		6.66E-14	7.92E-14	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
92	Selenium		1.49E-13	1.49E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
93	Silver		6.80E-16	6.80E-16	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00
94	Zinc		3.92E-13	3.92E-13	NA	0.00E+00	0.00E+00	0.00E+00	0.00E+00

TF = 0.8*0.04/0.3/k
Breast Milk = DI*TF(day)
EDI = BMC*IR/BW(infant)

8.00E-01 Ingestion Rate (kg/day)
9.00E+00 Body Weight (kg) - Infant

HALF LIVES
0.33
0.125
240
120
1.875
266
2120
60
0.3125
0.0625

2.08E+00 Acrylonitrile
5.54E+00 Benzene
2.89E-03 DDE
5.77E-03 DDT
3.70E-01 1,1-DCE & Phenol
2.61E-03 Dieldrin
3.27E-04 Dioxin
1.15E-02 Hexachlorobenzene
2.22E+00 Toluene
1.11E+01 Xylene

D
TABLE 8

K	EDD	g/Kg
1.70	CHIT	1.70
1.33	CHIT	1.33
1.83	CHIT	1.83
1.07	CHIT	1.07
3.84	CHIT	3.84
3.89	CHIT	3.89
1.12	CHIT	1.12
3.69	CHIT	3.69
8.67	CHIT	8.67
5.57	CHIT	5.57
7.93	CHIT	7.93
3.04	CHIT	3.04
1.86	CHIT	1.86
5.69	CHIT	5.69
4.21	CHIT	4.21
1.30	CHIT	1.30
4.32	CHIT	4.32
3.06	CHIT	3.06
1.15	CHIT	1.15
6.41	CHIT	6.41
1.85	CHIT	1.85
9.20	CHIT	9.20
3.68	CHIT	3.68
3.58	CHIT	3.58
2.02	CHIT	2.02
6.77	CHIT	6.77
3.58	CHIT	3.58
8.34	CHIT	8.34
6.85	CHIT	6.85
8.14	CHIT	8.14
2.51	CHIT	2.51
3.18	CHIT	3.18
2.46	CHIT	2.46
4.53	CHIT	4.53
9.97	CHIT	9.97
3.12	CHIT	3.12
9.33	CHIT	9.33
4.61	CHIT	4.61
6.20	CHIT	6.20
2.04	CHIT	2.04
5.95	CHIT	5.95
4.66	CHIT	4.66
3.30	CHIT	3.30
4.08	CHIT	4.08

117	B	C	D	E	F	G	H	I	J	K
118	BASE CASE									
177	TABLE 8									
178	INORGANICS									
179	Arsenic	1.90E-11	7.80E-10	3.60E-04	2.81E-13	1.35E-12	1.63E-12	1.34E-15	3.19E-15	
180	Cadmium	1.10E-13	4.52E-12	9.00E-03	4.07E-14	7.84E-15	4.86E-14	4.00E-17	9.47E-17	
181	Mercury	7.12E-13	2.93E-11	1.20E-02	3.51E-13	5.07E-14	4.02E-13	3.31E-16	7.84E-16	

ADULT
 6.40E-02
 7.00E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 0.9
 3.15E+07
 1.00E+03

CHILD
 3.36E-02
 1.55E+01
 6.80E-02
 5.78E-07
 3.89E+06
 1.34E+00
 7.85E+04
 9.00E-01
 3.15E+07
 1.00E+03

TOMATO INGESTION RATE ,Kg/day
 BODY WEIGHT, KG
 r tomato
 k tomato, 1/s
 t tomato, s
 Y tomato, Kg/M2
 VSDF tomato, M2s/Kg
 FRACT. CONSUMED FROM RURAL SOURCE.
 mg/g
 -kt

$$VSDF = r * (1 - e^{-Y * k})$$

$$Cs = VSDF * Deposition * mgg / secyr$$

$$Cu = PUF * C_{soil}$$

$$EDI = (Ct) * ADITOM * HG / ADWT$$

ADITOM
 r
 k
 t
 Y
 VSDF
 HG
 secyr
 mgg

117 B	C	M	N	O	P	Q	R	S	T
118	BASE CASE	TABLE 9							
119		TOMATO CONSUMPTION - MAXIMUM							
120									
121									
122		18-Jun-91							
123		15:15:33							
124			D	PUF	Cu	CS	Ct		
125			DRY	PLANT UPTAKE	MAXIMUM CONC. DU/E	MAXIMUM CONC. ON PLANT SURFACE	MAXIMUM CONC. ON PLANT	ED1 ADULT MAXIMUM ESTIMATED DAILY INTAKE	ED1 CHLD MAXIMUM ESTIMATED DAILY INTAKE
126			RATE	FACTOR	TO UPTAKE	mg/Kg	mg/Kg	mg/Kg/day	mg/Kg/day
127			g/M2/yr						
128									
129									
130	ORGANICS								
131	Acetonitrile	5.76E-11	2.40E-09	3.68E+00	8.82E-09	1.43E-10	8.96E-09	7.38E-12	1.75E-11
132	Aldrin	8.94E-17	3.73E-15	1.19E-04	4.44E-19	2.23E-16	2.23E-16	1.84E-19	4.36E-19
133	Aniline	3.24E-12	1.35E-10	7.02E-01	9.47E-11	8.07E-12	1.03E-12	8.45E-14	2.00E-13
134	Atrazine	2.00E-14	8.34E-13	6.51E-02	5.43E-14	4.98E-14	1.04E-13	8.57E-17	2.03E-16
135	Benzaldehyde	1.47E-12	6.15E-11	3.23E-01	1.99E-11	3.68E-12	2.36E-11	1.94E-14	4.60E-14
136	Benzo(a,h)anthracene	7.17E-12	2.99E-10	6.60E-02	1.97E-11	1.79E-11	3.76E-11	3.09E-14	7.34E-14
137	Benzo(a,h)anthracene	7.22E-13	3.01E-11	1.92E-01	5.78E-12	1.80E-12	7.58E-12	6.24E-15	1.48E-14
138	Benzo(a,h)anthracene	1.58E-11	6.57E-10	2.91E-01	1.91E-10	3.93E-11	2.30E-10	1.89E-13	4.49E-13
139	Benzo(a,h)anthracene	6.72E-15	2.80E-13	1.59E-01	4.46E-14	1.67E-14	6.14E-14	5.05E-17	1.20E-16
140	Bis(2-ethylhexyl)phthalate	3.96E-15	1.65E-13	2.02E-05	3.33E-18	9.88E-15	9.88E-15	8.13E-18	1.93E-17
141	Carbazole	3.24E-14	1.35E-12	2.88E-02	3.89E-14	8.07E-14	1.20E-13	9.84E-17	2.33E-16
142	4-Chloroaniline	1.85E-15	7.73E-14	2.03E-01	1.57E-14	4.62E-15	2.03E-14	1.67E-17	3.96E-17
143	4-Chlorobiphenyl	4.57E-15	1.90E-13	3.36E-03	6.39E-16	4.13E-14	2.03E-14	1.67E-17	3.96E-17
144	4,4'-Dichlorobiphenyl	2.30E-16	1.00E-13	3.36E-03	6.39E-16	4.13E-14	2.03E-14	1.67E-17	3.96E-17
145	Chloroethane	1.64E-13	6.82E-12	1.35E-03	1.30E-17	5.73E-16	5.86E-16	4.82E-19	1.14E-18
146	Dibenzofuran	1.44E-13	6.00E-12	3.19E-01	2.18E-12	4.08E-13	2.58E-12	2.13E-15	5.04E-15
147	1,2-Dichloroethane	1.66E-14	6.91E-13	9.52E-03	5.71E-14	3.59E-13	4.16E-13	3.42E-16	8.11E-16
148	Dieldrin	1.64E-16	6.84E-15	5.92E-04	2.23E-13	4.13E-14	2.65E-13	2.18E-16	5.16E-16
149	Hexachlorobenzene	4.34E-13	1.81E-11	1.57E-03	4.05E-18	4.09E-16	4.13E-16	3.40E-19	8.06E-19
150	Hydrazine	5.61E-17	2.34E-08	1.43E+02	3.34E-06	1.40E-12	3.34E-06	9.13E-16	2.16E-15
151	Lindane	7.63E-17	3.18E-15	4.82E-02	9.04E-17	1.90E-16	2.81E-16	2.31E-19	5.47E-19
152	Malathion	2.25E-16	9.39E-15	2.85E-02	4.62E-16	5.61E-16	1.02E-15	8.42E-19	2.00E-18
153	Methyl ethyl ketone	2.78E-14	1.16E-12	1.65E+00	1.91E-12	6.94E-14	1.98E-12	1.63E-15	3.87E-15
154	4-Methylphenol	2.53E-14	1.05E-12	1.75E-01	1.84E-13	6.29E-14	2.47E-13	2.03E-16	4.82E-16
155	Monomethyl hydrazine	1.77E-10	7.37E-09	1.43E+02	1.05E-06	4.41E-10	1.05E-06	8.66E-10	2.05E-09
156	Naphthalene	2.98E-15	1.24E-13	2.66E-02	3.31E-15	7.43E-15	1.07E-14	8.83E-18	2.09E-17
157	Naphthalene carbonitrile	1.58E-11	6.57E-10	2.66E-02	1.75E-11	3.93E-11	5.68E-11	4.67E-14	1.11E-13
158	n-Nitrosodimethylamine	1.80E-13	7.49E-12	5.79E+00	4.34E-11	4.48E-13	4.38E-11	3.61E-14	8.55E-14
159	PAHs								
160	Acenaphthalene	7.17E-13	2.99E-11	1.02E-02	3.04E-13	1.79E-12	2.09E-12	1.72E-15	4.08E-15
161	Acenaphthene	7.17E-13	2.99E-11	1.24E-02	3.72E-13	1.79E-12	2.16E-12	1.78E-15	4.21E-15
162	Benzo(a)pyrene	1.44E-12	6.00E-11	4.41E-04	2.65E-14	3.59E-13	3.61E-12	2.97E-15	7.05E-15
163	Chrysene	1.44E-13	6.00E-12	1.02E-03	6.14E-15	3.59E-13	3.65E-13	3.00E-16	7.12E-16
164	Dibenz(a,h)anthracene	1.44E-12	6.00E-11	3.96E-04	2.38E-14	3.59E-12	3.61E-12	2.97E-15	7.05E-15
165	Fluoranthene	1.44E-12	6.00E-11	2.19E-03	1.31E-13	3.59E-12	3.72E-12	3.06E-15	7.26E-15
166	Fluorene	1.44E-13	6.00E-12	6.73E-03	4.04E-14	3.59E-13	3.99E-13	3.28E-16	7.79E-16
167	Phenanthrene	5.61E-16	2.34E-14	5.22E-03	1.22E-16	1.40E-15	1.52E-15	1.25E-18	2.96E-18
168	Pyrene	2.88E-12	1.20E-10	2.31E-03	2.77E-13	7.17E-12	7.45E-12	6.13E-15	1.45E-14
169	Parathion	3.57E-16	1.49E-14	1.44E-02	2.14E-16	8.89E-16	1.10E-15	9.07E-19	2.15E-18
170	Pentachlorobenzene	1.77E-13	7.37E-12	2.64E-03	1.95E-14	4.41E-13	4.60E-13	3.79E-16	8.97E-16
171	Phenol	2.83E-15	1.18E-13	3.32E-01	3.92E-14	7.05E-15	4.62E-14	3.80E-17	9.01E-17
172	Quinoline	1.62E-13	6.76E-12	1.55E-01	1.05E-12	4.04E-13	1.45E-12	1.20E-15	2.83E-15
173	Tetrachlorobenzene	8.69E-14	3.62E-12	6.82E-03	2.47E-14	2.17E-13	2.41E-13	1.98E-16	4.71E-16
174	Trichlorobenzene	4.40E-14	1.83E-12	1.15E-02	2.10E-14	1.10E-13	1.31E-13	1.08E-16	2.55E-16
175	Unsym. dimethyl hydrazine	6.97E-10	2.91E-08	5.91E+01	1.72E-06	1.74E-09	1.72E-06	1.41E-09	3.35E-09
176	Vapona	1.41E-15	5.87E-14	3.60E-01	2.11E-14	3.51E-15	2.46E-14	2.03E-17	4.81E-17

117	B	C	M	N	O	P	Q	R	S	T
118	BASE CASE									
177	TABLE 9									
178	INORGANICS									
179	Arsenic	1.90E-11	7.92E-10	3.60E-04	2.85E-13	4.73E-11	4.76E-11	3.92E-14	9.29E-14	
180	Cadmium	1.10E-13	4.59E-12	9.00E-03	4.13E-14	2.74E-13	3.16E-13	2.60E-16	6.16E-16	
181	Mercury	7.12E-13	2.97E-11	1.20E-02	3.56E-13	1.77E-12	2.13E-12	1.75E-15	4.16E-15	

ADULT
6.40E-02
7.00E+01
6.80E-02
5.78E-07
3.89E+06
1.34E+00
7.85E+04
9.00E-01
3.15E+07
1.00E+03

CHILD
3.36E-02
1.55E+01
6.80E-02
5.78E-07
3.89E+06
1.34E+00
7.85E+04
9.00E-01
3.15E+07
1.00E+03

TOMATO INGESTION RATE ,Kg/day
BODY WEIGHT, KG
r tomato
k tomato, 1/s
t tomato, s
Y tomato, Kg/M2
VSDf tomato, M2s/Kg
FRACT. CONSUMED FROM RURAL SOURCE.
sec/yr
mg/g
-kt

ADITOM
ADWT
r
k
t
Y
VSDf
HG
secyr
mgg

$$VSDf = r * (1 - e^{-y * k})$$

$$Cs = VSDf * Deposition * mgg / secyr$$

$$Cu = PUF * Csoil$$

$$EDI = (Ct) * ADITOM * HG / ADWT$$

117	B	C	V	W	X	Y	Z	AA	AB	AC
118	BASE CASE		TABLE 10							
119			LETUCE CONSUMPTION - AVERAGE							
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130	ORGANICS									
131	Acetonitrile	5.76E-11	2.37E-09	3.06E+00	7.25E-09	8.24E-12	7.25E-09	7.25E-09	1.11E-12	5.22E-13
132	Aldrin	8.94E-17	3.67E-15	9.93E-05	3.65E-19	1.28E-17	1.32E-17	1.32E-17	2.01E-21	9.48E-22
133	Aniline	3.24E-12	1.33E-10	5.85E-01	7.78E-11	4.64E-13	7.82E-11	7.82E-11	1.20E-14	5.63E-15
134	Atrazine	2.00E-14	8.22E-13	5.43E-02	4.46E-14	2.86E-15	4.75E-14	4.75E-14	7.26E-18	3.42E-18
135	Benzaldehyde	1.47E-12	6.06E-11	2.69E-01	1.63E-11	2.11E-13	1.65E-11	1.65E-11	2.53E-15	1.19E-15
136	Benzofuran	7.17E-12	2.95E-10	5.50E-02	1.62E-11	1.03E-12	1.72E-11	1.72E-11	2.64E-15	1.24E-15
137	Benzoic Acid	7.22E-13	2.97E-11	1.60E-01	4.75E-12	1.03E-13	4.85E-12	4.85E-12	7.43E-16	3.49E-16
138	Benzonitrile	1.58E-11	6.47E-10	2.42E-01	1.57E-10	9.62E-16	1.59E-10	1.59E-10	2.43E-14	1.15E-14
139	Benzothiazole	6.72E-15	2.76E-13	1.33E-01	3.66E-14	5.70E-16	3.76E-14	3.76E-14	5.75E-18	2.71E-18
140	Bis(2-ethylhexyl)phthalate	3.96E-15	1.63E-13	1.68E-05	2.74E-18	5.68E-16	5.70E-16	5.70E-16	8.73E-20	4.11E-20
141	Carbazole	3.24E-14	1.33E-12	2.40E-02	3.20E-14	4.64E-15	3.66E-14	3.66E-14	5.60E-18	2.64E-18
142	4-Chloroaniline	1.85E-15	7.62E-14	1.69E-01	1.29E-14	2.65E-16	1.31E-14	1.31E-14	2.01E-18	9.45E-19
143	4-Chlorobiphenyl	4.57E-15	1.88E-13	2.80E-03	5.25E-16	6.54E-16	1.18E-15	1.18E-15	1.80E-19	8.49E-20
144	4,4'-Chlorobiphenyl	2.30E-16	9.44E-15	1.13E-03	1.07E-17	3.29E-17	4.36E-17	4.36E-17	6.66E-21	3.14E-21
145	Chloroethane	1.64E-13	6.72E-12	2.66E-01	1.79E-12	2.34E-14	1.81E-12	1.81E-12	2.77E-16	1.30E-16
146	Dibenzofuran	1.44E-13	5.91E-12	7.93E-03	4.69E-14	2.06E-14	6.75E-14	6.75E-14	1.03E-17	4.86E-18
147	1,2-Dichloroethane	1.66E-14	6.81E-13	2.69E-01	1.83E-13	2.37E-15	1.86E-13	1.86E-13	2.84E-17	1.34E-17
148	Dieldrin	1.64E-16	6.74E-15	4.93E-04	3.33E-18	2.35E-17	2.68E-17	2.68E-17	4.10E-21	1.93E-21
149	Hexachlorobenzene	4.34E-13	1.78E-11	1.31E-03	2.33E-14	6.21E-14	8.54E-14	8.54E-14	1.31E-17	6.15E-18
150	Hydrazine	5.61E-10	2.30E-08	1.19E-02	2.74E-06	8.03E-11	2.74E-06	2.74E-06	4.19E-10	1.97E-10
151	Lindane	7.63E-17	3.13E-15	2.37E-02	7.43E-17	1.09E-17	8.52E-17	8.52E-17	1.30E-20	6.14E-21
152	Malathion	2.25E-16	9.26E-15	4.10E-02	3.79E-16	3.23E-17	4.12E-16	4.12E-16	6.30E-20	2.96E-20
153	Methyl ethyl ketone	2.78E-14	1.14E-12	1.37E+00	1.57E-12	3.98E-15	1.58E-12	1.58E-12	2.41E-16	1.13E-16
154	4-Methylphenol	2.53E-14	1.04E-12	1.44E-01	1.51E-13	3.62E-15	1.55E-13	1.55E-13	2.37E-17	1.12E-17
155	Monomethyl hydrazine	1.77E-10	7.26E-09	1.19E+02	8.64E-07	2.53E-11	8.64E-07	8.64E-07	1.32E-10	6.22E-11
156	Naphthalene	2.98E-15	1.22E-13	2.22E-02	2.72E-15	4.27E-16	3.14E-15	3.14E-15	4.81E-19	2.26E-19
157	Naphthalene carbonitrile	1.58E-11	6.47E-10	2.22E-02	1.44E-11	2.26E-12	1.66E-11	1.66E-11	2.54E-15	1.20E-15
158	n-Nitrosodimethylamine	1.80E-13	7.39E-12	4.82E+00	3.56E-11	2.57E-14	3.57E-11	3.57E-11	5.46E-15	2.57E-15
159	PAHs									
160	Acenaphthalene	7.17E-13	2.95E-11	8.48E-03	2.50E-13	1.03E-13	3.53E-13	3.53E-13	5.39E-17	2.54E-17
161	Acenaphthene	7.17E-13	2.95E-11	1.04E-02	3.05E-13	1.03E-13	4.08E-13	4.08E-13	6.24E-17	2.94E-17
162	Benzo(a)pyrene	1.44E-12	5.91E-11	3.68E-04	2.17E-14	2.06E-13	2.28E-13	2.28E-13	3.49E-17	1.64E-17
163	Chrysene	1.44E-13	5.91E-12	8.53E-04	5.04E-15	2.06E-14	2.57E-14	2.57E-14	3.92E-18	1.85E-18
164	Dibenzo(a,h)anthracene	1.44E-12	5.91E-11	3.30E-04	1.95E-14	2.06E-13	2.26E-13	2.26E-13	3.45E-17	1.62E-17
165	Fluoranthene	1.44E-12	5.91E-11	1.83E-03	1.08E-13	2.06E-13	2.14E-13	2.14E-13	4.80E-17	2.26E-17
166	Fluorene	1.44E-13	5.91E-12	5.60E-03	3.31E-14	2.06E-14	5.38E-14	5.38E-14	8.22E-18	3.87E-18
167	Phenanthrene	5.61E-16	2.30E-14	4.35E-03	1.00E-16	8.03E-17	1.80E-16	1.80E-16	2.76E-20	1.30E-20
168	Pyrene	2.88E-12	1.18E-10	1.93E-03	2.28E-13	4.12E-13	6.40E-13	6.40E-13	9.79E-17	4.61E-17
169	Parathion	3.57E-16	1.47E-14	1.20E-02	1.76E-16	5.11E-17	2.27E-16	2.27E-16	3.47E-20	1.63E-20
170	Pentachlorobenzene	1.77E-13	7.26E-12	2.20E-03	1.60E-14	2.53E-14	4.13E-14	4.13E-14	6.32E-18	2.97E-18
171	Phenol	2.83E-15	1.16E-13	2.77E-01	3.22E-14	4.05E-16	3.26E-14	3.26E-14	4.98E-18	2.34E-18
172	Quinoline	1.62E-13	6.66E-12	1.29E-01	8.61E-13	2.32E-14	8.84E-13	8.84E-13	1.35E-16	6.37E-17
173	Tetrachlorobenzene	8.69E-14	3.57E-12	5.68E-03	2.03E-14	1.24E-14	3.27E-14	3.27E-14	5.00E-18	2.36E-18
174	Trichlorobenzene	4.40E-14	1.81E-12	9.56E-03	1.73E-14	6.30E-15	2.36E-14	2.36E-14	3.61E-18	1.70E-18
175	Unsym. dimethyl hydrazine	6.97E-10	2.86E-08	4.93E+01	1.41E-06	9.98E-11	1.41E-06	1.41E-06	2.16E-10	1.02E-10
176	Vapona	1.41E-15	5.79E-14	3.00E-01	1.74E-14	2.02E-16	1.76E-14	1.76E-14	2.69E-18	1.26E-18

117	B	C	V	W	X	Y	Z	AA	AB	AC
118	BASE CASE		TABLE 10							
177										
178	INORGANICS									
179	Arsenic		1.90E-11	7.80E-10	2.00E-03	1.56E-12	2.72E-12	4.28E-12	6.55E-16	3.08E-16
180	Cadmium		1.10E-13	4.52E-12	2.75E-02	1.24E-13	1.58E-14	1.40E-13	2.14E-17	1.01E-17
181	Mercury		7.12E-13	2.93E-11	4.50E-02	1.32E-12	1.02E-13	1.42E-12	2.17E-16	1.02E-16

ADULT
 1.19E-02
 7.00E+01
 1.50E-01
 5.78E-07
 5.62E+06
 1.58E+00
 1.58E+05
 9.00E-01
 3.15E+07
 1.00E+03

CHILD
 1.24E-03
 1.55E+01
 1.50E-01
 5.78E-07
 5.62E+06
 1.58E+00
 1.58E+05
 9.00E-01
 3.15E+07
 1.00E+03

LETUCE INGESTION RATE ,Kg/day
 BODY WEIGHT, KG
 r lettuce
 k lettuce, 1/s
 t lettuce, s
 y lettuce, Kg/M2
 VSDf lettuce, M2s/Kg
 FRACT. CONSUMED FROM RURAL SOURCE.
 sec/yr
 mg/g
 -kt

$$VSDf = r * (1 - e^{-k})$$

Cs = VSDf*Deposition*mgg/secyr
 Cu = PUF*Cssoil
 EDI = (Cs+Cu)*ADILET*HG/ADWT

ADILET
 ADWT
 r
 k
 t
 y
 VSDf
 HG
 secyr
 mgg

195
 196
 197
 198
 199

117 B	C	AE	AF	AG	AH	AI	AJ	AK	AL
118	BASE CASE	TABLE 11							
119		LETUCE CONSUMPTION - MAXIMUM							
120									
121									
122									
123									
124									
125									
126									
127									
128									
129									
130	ORGANICS								
131	Acetonitrile	5.76E-11	2.40E-09	3.06E+00	7.35E-09	2.89E-10	7.64E-09	1.17E-12	5.50E-13
132	Aldrin	8.94E-17	3.73E-15	9.93E-05	3.70E-19	4.48E-16	4.48E-16	6.86E-20	3.23E-20
133	Aniline	3.24E-12	1.35E-10	5.85E-01	7.89E-11	1.62E-11	9.51E-11	1.46E-14	6.85E-15
134	Atrazine	2.00E-14	8.34E-13	5.43E-02	4.52E-14	1.00E-13	1.45E-13	2.23E-17	1.05E-17
135	Benzaldehyde	1.47E-12	6.15E-11	2.69E-01	1.66E-11	7.39E-12	2.40E-11	3.67E-15	1.72E-15
136	Benzo(a)pyrene	7.17E-12	2.99E-10	5.50E-02	1.64E-11	3.59E-11	5.24E-11	8.01E-15	3.77E-15
137	Benzoic Acid	7.22E-13	3.01E-11	1.60E-01	4.82E-12	3.62E-12	8.44E-12	1.29E-15	6.08E-16
138	Benzonitrile	1.58E-11	6.57E-10	2.42E-01	1.59E-10	7.90E-11	2.38E-10	3.64E-14	1.71E-14
139	Benzothiazole	6.72E-15	2.80E-13	1.33E-01	3.72E-14	3.37E-14	7.08E-14	1.08E-17	5.10E-18
140	Bis(2-ethylhexyl)phthalate	3.96E-15	1.65E-13	1.68E-05	2.78E-18	1.99E-14	1.99E-14	3.04E-18	1.43E-18
141	Carbazole	3.24E-14	1.35E-12	2.40E-02	3.24E-14	1.62E-13	1.95E-13	2.98E-17	1.40E-17
142	4-Chloroaniline	1.85E-15	7.73E-14	1.69E-01	1.30E-14	9.29E-15	2.23E-14	3.42E-18	1.61E-18
143	4-Chlorobiphenyl	4.57E-15	1.90E-13	2.80E-03	5.33E-16	2.29E-14	2.34E-14	3.58E-18	1.69E-18
144	4,4'-Chlorobiphenyl	2.30E-16	9.58E-15	1.13E-03	1.08E-17	1.15E-15	1.16E-15	1.78E-19	8.37E-20
145	Chloroethane	1.64E-13	6.82E-12	2.66E-01	1.81E-12	8.20E-13	2.63E-12	4.03E-16	1.90E-16
146	Dibenzofuran	1.44E-13	6.00E-12	7.93E-03	4.76E-14	7.21E-13	7.69E-13	1.18E-16	5.54E-17
147	1,2-Dichloroethane	1.66E-14	6.91E-13	2.69E-01	1.86E-13	8.30E-14	2.69E-13	4.12E-17	1.94E-17
148	Dieldrin	1.64E-16	6.84E-15	4.93E-04	3.37E-18	8.23E-16	8.26E-16	1.26E-19	5.95E-20
149	Hexachlorobenzene	4.34E-13	1.81E-11	1.31E-03	2.36E-14	2.17E-12	2.20E-12	3.36E-16	1.58E-16
150	Hydrazine	5.61E-10	2.34E-08	1.19E+02	2.78E-06	2.81E-09	2.78E-06	4.26E-10	2.00E-10
151	Lindane	7.63E-17	3.18E-15	2.37E-02	7.54E-17	3.82E-16	4.58E-16	7.00E-20	3.29E-20
152	Malathion	2.25E-16	9.39E-15	4.10E-02	3.85E-16	1.13E-15	1.51E-15	2.32E-19	1.09E-19
153	Methyl ethyl ketone	2.78E-14	1.16E-12	1.37E+00	1.59E-12	1.39E-13	1.73E-12	2.65E-16	1.25E-16
154	4-Methylphenol	2.53E-14	1.05E-12	1.46E-01	1.53E-13	1.27E-13	2.80E-13	4.28E-17	2.02E-17
155	Monomethyl hydrazine	1.77E-10	7.37E-09	1.19E+02	8.76E-07	8.86E-10	8.77E-07	1.34E-10	6.32E-11
156	Naphthalene	2.98E-15	1.24E-13	2.22E-02	2.75E-15	1.49E-14	1.77E-14	2.71E-18	1.27E-18
157	Naphthalene carbonitrile	1.58E-11	6.57E-10	2.22E-02	1.46E-11	7.90E-11	9.35E-11	1.43E-14	6.73E-15
158	n-Nitrosodimethylamine	1.80E-13	7.49E-12	4.82E+00	3.61E-11	9.01E-13	3.70E-11	5.67E-15	2.67E-15
159	PAHs								
160	Acenaphthalene	7.17E-13	2.99E-11	8.48E-03	2.53E-13	3.59E-12	3.85E-12	5.89E-16	2.77E-16
161	Acenaphthene	7.17E-13	2.99E-11	1.04E-02	3.10E-13	3.59E-12	3.90E-12	5.97E-16	2.81E-16
162	Benzo(a)pyrene	1.44E-12	6.00E-11	3.68E-04	2.21E-14	7.21E-12	7.24E-12	1.11E-15	5.21E-16
163	Chrysene	1.44E-13	6.00E-12	8.53E-04	5.12E-15	7.21E-13	7.26E-13	1.11E-16	5.23E-17
164	Dibenzo(a,h)anthracene	1.44E-12	6.00E-11	3.30E-04	1.98E-14	7.21E-12	7.23E-12	1.11E-15	5.21E-16
165	Fluoranthene	1.44E-12	6.00E-11	1.83E-03	1.10E-13	7.21E-12	7.32E-12	1.12E-15	5.27E-16
166	Fluorene	1.44E-13	6.00E-12	5.60E-03	3.36E-14	7.21E-13	7.55E-13	1.16E-16	5.44E-17
167	Phenanthrene	5.61E-16	2.34E-14	4.35E-03	1.02E-16	2.81E-15	2.91E-15	4.45E-19	2.10E-19
168	Pyrene	2.88E-12	1.20E-10	1.93E-03	2.31E-13	1.44E-11	1.47E-11	2.24E-15	1.06E-15
169	Parathion	3.57E-16	1.49E-14	1.20E-02	1.78E-16	1.79E-15	1.97E-15	3.01E-19	1.41E-19
170	Pentachlorobenzene	1.77E-13	7.37E-12	2.20E-03	1.62E-14	8.86E-13	9.02E-13	1.38E-16	6.49E-17
171	Phenol	2.83E-15	1.18E-13	2.77E-01	3.26E-14	4.68E-14	4.68E-14	7.16E-18	3.37E-18
172	Quinoline	1.62E-13	6.76E-12	1.29E-01	8.74E-13	8.12E-13	1.69E-12	2.58E-16	1.21E-16
173	Tetrachlorobenzene	8.69E-14	3.62E-12	5.68E-03	2.06E-14	4.35E-13	4.56E-13	6.98E-17	3.28E-17
174	Trichlorobenzene	4.40E-14	1.83E-12	9.56E-03	1.75E-14	2.20E-13	2.38E-13	3.64E-17	1.71E-17
175	Unsym. dimethyl hydrazine	6.97E-10	2.91E-08	4.93E+01	1.43E-06	3.49E-09	1.43E-06	2.20E-10	1.03E-10
176	Vapona	1.41E-15	5.87E-14	3.00E-01	1.76E-14	7.06E-15	2.47E-14	3.78E-18	1.78E-18

117	B	C	AE	AF	AG	AH	AI	AJ	AK	AL
118	BASE CASE		TABLE 11							
177										
178	INORGANICS									
179	Arsenic		1.90E-11	7.92E-10	2.00E-03	1.58E-12	9.52E-11	9.67E-11	1.48E-14	6.97E-15
180	Cadmium		1.10E-13	4.59E-12	2.75E-02	1.26E-13	5.52E-13	6.78E-13	1.04E-16	4.88E-17
181	Mercury		7.12E-13	2.97E-11	4.50E-02	1.34E-12	3.57E-12	4.90E-12	7.50E-16	3.53E-16

183	ADULT									
184	1.19E-02									
185	7.00E+01									
186	1.50E-01									
187	5.78E-07									
188	5.62E+06									
189	1.58E+00									
190	1.58E+05									
191	9.00E-01									
192	3.15E+07									
193	1.00E+03									

VSDF = $r \cdot (1 - e^{-Y \cdot K})$

Y*K

Cs = VSDF*Deposition*mgg/secyr

Cu = PUF*Cssoil

EDI = (Cs+Cu)*ADILET*HG/ADWT

194	CHILD									
195	1.24E-03									
196	1.55E+01									
197	1.50E-01									
198	5.78E-07									
199	5.62E+06									

ADILET
ADWT
r
k
t
Y
VSDF
HG
secyr
mgg

LETUCE INGESTION RATE ,Kg/day

BODY WEIGHT, KG

r lettuce

k lettuce, 1/s

t lettuce, s

Y lettuce, Kg/M2

VSDF lettuce, M2s/Kg

9.00E-01 FRACT. CONSUMED FROM RURAL SOURCE.

3.15E+07 sec/yr

1.00E+03 mg/g

-kt

117 B	BASE CASE	C	AO TABLE 12 CARROT CONSUMPTION - AVERAGE	AP	AQ	AR	AS	AT	AU
118									
119									
120									
121									
122									
123									
124									
125									
126									
127									
128									
129									
130	ORGANICS								
131	Acetonitrile		2.37E-09	-0.34	2.2	2.68E+01	6.33E-08	5.32E-11	1.14E-10
132	Aladin		3.67E-15	7.4	96000	1.11E+01	4.06E-14	3.41E-17	7.33E-17
133	Aniline		1.33E-10	0.9	73.553	9.28E-01	1.23E-10	1.04E-13	2.23E-13
134	Atrazine		8.22E-13	2.68	320	9.50E-01	7.81E-13	6.55E-16	1.41E-15
135	Benzaldehyde		6.06E-11	1.48	152	5.73E-01	3.47E-11	2.91E-14	6.27E-14
136	Benzo(a,h)anthracene		2.95E-10	2.67	313	9.57E-01	2.82E-10	2.37E-13	5.09E-13
137	Benzoic Acid		2.97E-11	1.87	248	4.69E-01	1.39E-11	1.17E-14	2.51E-14
138	Benzo(b)fluoranthene		6.47E-10	1.56	168	5.45E-01	3.53E-10	2.96E-13	6.37E-13
139	Benzo(b)thiophene		2.76E-13	2.01	295.42	4.50E-01	1.24E-13	1.04E-16	2.24E-16
140	Bis(2-ethylhexyl)phthalate		1.63E-13	8.73	1336965	8.39E+00	1.37E-12	1.15E-15	2.47E-15
141	Carbazole		1.33E-12	3.29	1193	6.57E-01	8.74E-13	7.34E-16	1.58E-15
142	4-Chloroaniline		7.62E-14	1.83	349.5	3.21E-01	2.45E-14	2.05E-17	4.42E-17
143	4-Chlorobiphenyl		1.88E-13	4.9	38486	3.29E-01	6.17E-14	5.18E-17	1.12E-16
144	4,4'-Chlorobiphenyl		9.44E-15	5.58	166901	2.53E-01	2.39E-15	2.00E-18	4.31E-18
145	Chloroethane		6.72E-12	1.49	143	6.13E-01	4.12E-12	3.46E-15	7.44E-15
146	Dibenzofuran		5.91E-12	4.12	7152	4.50E-01	2.66E-12	2.24E-15	4.81E-15
147	1,2-Dichloroethane		6.81E-13	1.48	14	6.22E+00	4.23E-12	3.55E-15	7.64E-15
148	Dieldrin		6.74E-15	6.2	1700	7.44E+01	5.02E-13	4.21E-16	9.06E-16
149	Hexachlorobenzene		1.78E-11	5.47	50000	6.94E-01	1.24E-11	1.04E-14	2.23E-14
150	Hydrazine		2.30E-08	-3.08	0.1	5.78E+02	1.33E-05	1.12E-08	2.40E-08
151	Lindane		3.13E-15	3.3	1000	7.97E-01	2.50E-15	2.10E-18	4.51E-18
152	Malathion		9.26E-15	2.89	1800	2.31E-01	2.13E-15	1.79E-18	3.85E-18
153	Methyl ethyl ketone		1.14E-12	0.26	4.5	1.36E+01	1.55E-11	1.30E-14	2.80E-14
154	4-Methylphenol		1.04E-12	1.94	49	2.53E+00	2.63E-12	2.21E-15	4.74E-15
155	Monomethyl hydrazine		7.26E-09	-3.08	0.503	1.15E+02	8.34E-07	7.00E-10	1.51E-09
156	Naphthalene		1.22E-13	3.35	871	9.94E-01	1.22E-13	1.02E-16	2.20E-16
157	Naphthalene carbonitrile		6.47E-10	3.35	871	9.94E-01	6.43E-10	5.40E-13	1.16E-12
158	n-Nitrosodimethylamine		7.39E-12	-0.68	0.1	5.84E+02	4.31E-09	3.62E-12	7.79E-12
159	PAHs								
160	Acenaphthalene		2.95E-11	4.07	2500	1.18E+00	3.48E-11	2.92E-14	6.28E-14
161	Acenaphthene		2.95E-11	3.92	4600	4.95E-01	1.46E-11	1.22E-14	2.63E-14
162	Benzo(a)pyrene		5.91E-11	6.42	5500000	3.40E-02	2.01E-12	1.69E-15	3.63E-15
163	Chrysene		5.91E-12	5.79	200000	3.06E-01	1.81E-12	1.52E-15	3.27E-15
164	Dibenzo(a,h)anthracene		5.91E-11	6.5	3300000	6.52E-02	3.86E-12	3.24E-15	6.96E-15
165	Fluoranthene		5.91E-11	5.22	38000	5.87E-01	3.47E-11	2.91E-14	6.27E-14
166	Fluorene		5.91E-12	4.38	7300	6.95E-01	4.11E-12	3.45E-15	7.42E-15
167	Phenanthrene		2.30E-14	4.57	14000	5.06E-01	1.17E-14	9.78E-18	2.10E-17
168	Pyrene		1.18E-10	5.18	38000	5.47E-01	6.47E-11	5.43E-14	1.17E-13
169	Parathion		1.47E-14	3.81	3664	5.14E-01	7.53E-15	6.32E-18	1.36E-17
170	Pentachlorobenzene		7.26E-12	5.08	13000	1.34E+00	9.73E-12	8.17E-15	1.76E-14
171	Phenol		1.16E-13	1.46	14	6.15E+00	7.14E-13	6.00E-16	1.29E-15
172	Quinoline		6.66E-12	2.03	79	1.72E+00	1.14E-11	9.59E-15	2.06E-14
173	Tetrachlorobenzene		3.57E-12	4.37	1600	3.12E+00	1.11E-11	9.34E-15	2.01E-14
174	Trichlorobenzene		1.81E-12	3.98	9200	2.75E-01	4.96E-13	4.17E-16	8.96E-16
175	Unsym. dimethyl hydrazine		2.86E-08	-2.42	0.2	2.89E+02	8.27E-06	6.95E-09	1.49E-08
176	Vapona		5.79E-14	1.4	138	6.03E-01	3.49E-14	2.93E-17	6.30E-17

117	B	C	TABLE 12	AO	AP	AQ	AR	AS	AT	AU
118	BASE CASE									
177										
178	INORGANICS									
179	Arsenic			7.80E-10			7.20E-04	5.62E-13	4.72E-16	1.01E-15
180	Cadmium			4.52E-12			1.80E-02	8.14E-14	6.84E-17	1.47E-16
181	Mercury			2.93E-11			2.40E-02	7.02E-13	5.90E-16	1.27E-15

ADULT CHILD
 1.42E-02 1.42E-02 SOIL ORGANIC CARBON CONTENT
 0.0653 0.0311 CARROT INGESTION RATE ,Kg/day
 7.00E+01 1.55E+01 BODY WEIGHT, KG
 9.00E-01 9.00E-01 FRACTION OF CARROTS HOMEGROWN

$\log(\text{RCF}-0.82) = 0.77 \log \text{Kow}-1.52$
 RUF = RCF

$\text{Cplant} = \text{RUF} * \text{Csoil}$

$\text{EDI} = \text{C plant} * \text{ADICAR} * \text{HG} / \text{ADWT}$
 $\text{EDI (total)} = \text{DI tomato} + \text{DI lettuce} + \text{DI carrot}$

Foc
 ADICAR
 ADWT
 HG

191
 192
 193
 194
 195
 196

117	B	C	BASE CASE	AY	AX	AY	AZ	BA	BB	BC
118	119		TABLE 13							
120	121		CARROT CONSUMPTION - MAXIMUM							
122	123									
124	125									
126	127									
128	129									
130	131	18-Jun-91	C soil							
132	133	15:15:33	MAXIMUM							
134	135		CALCULATED	Log Kow	Koc	RUF	C plant	EDI	EDI	EDI
136	137		CONC IN			FACTOR	TO UPTAKE	ADULT	CHILD	MAXIMUM
138	139		SOIL				mg/Kg	DAILY	DAILY	ESTIMATED
140	141		.2M					INTAKE	INTAKE	INTAKE
142	143		mg/Kg					mg/Kg/day	mg/Kg/day	mg/Kg/day
144	145									
146	147									
148	149									
150	151									
152	153									
154	155									
156	157									
158	159									
160	161									
162	163									
164	165									
166	167									
168	169									
170	171									
172	173									
174	175									
176	177									

ORGANICS

Acetonitrile	2.40E-09	-3.40E-01	2.20E+00	2.68E+01	6.43E-08	5.40E-11	1.16E-10
Aldrin	3.73E-15	7.40E+00	9.60E+04	1.11E+01	4.12E-14	3.46E-17	7.44E-17
Aniline	1.35E-10	9.00E-01	7.36E+01	9.28E-01	1.25E-10	1.05E-13	2.26E-13
Atrazine	8.34E-13	2.68E+00	3.20E+02	9.50E-01	7.92E-13	6.65E-16	1.43E-15
Benzaldehyde	6.15E-11	1.48E+00	1.52E+02	5.73E-01	3.52E-11	2.96E-14	6.36E-14
Benzo(a,h)anthracene	2.99E-10	2.67E+00	3.13E+02	9.57E-01	2.86E-10	2.40E-13	5.17E-13
Benzoic Acid	3.01E-11	1.87E+00	2.48E+02	4.69E-01	1.41E-11	1.19E-14	2.55E-14
Benzonitrile	6.57E-10	1.56E+00	1.68E+01	5.45E-01	3.58E-10	3.01E-13	6.46E-13
Benzothiazole	2.80E-13	2.01E+00	2.95E+02	4.50E-01	1.26E-13	1.06E-16	2.27E-16
Bis(2-ethylhexyl)phthalate	1.65E-13	8.73E+00	1.34E+06	8.39E+00	1.39E-12	1.16E-15	2.50E-15
Carbazole	1.35E-12	3.29E+00	1.19E+03	6.57E-01	8.87E-13	7.44E-16	1.60E-15
4-Chloroaniline	7.73E-14	1.83E+00	3.50E+02	3.21E-01	2.48E-14	2.08E-17	4.48E-17
4-Chlorobiphenyl	1.90E-13	4.90E+00	3.85E+04	3.29E-01	6.26E-14	5.26E-17	1.13E-16
4,4'-Chlorobiphenyl	9.58E-15	5.58E+00	1.67E+05	2.53E-01	2.42E-15	2.03E-18	4.37E-18
Chloroethane	6.82E-12	1.49E+00	1.43E+02	6.13E-01	4.18E-12	3.51E-15	7.55E-15
Dibenzofuran	6.00E-12	4.12E+00	7.15E+03	4.50E-01	2.70E-12	2.27E-15	4.88E-15
1,2-Dichloroethane	6.91E-13	1.48E+00	1.40E+01	6.22E+00	4.29E-12	3.61E-15	7.76E-15
Dieldrin	6.84E-15	6.20E+00	1.70E+03	7.44E+01	5.09E-13	4.27E-16	9.19E-16
Hexachlorobenzene	1.81E-11	5.47E+00	5.00E+04	6.94E-01	1.26E-11	1.05E-14	2.27E-14
Hydrazine	2.34E-08	-3.08E+00	1.00E-01	5.78E+02	1.35E-05	1.13E-08	2.44E-08
Lindane	3.18E-15	3.30E+00	1.00E+03	7.97E-01	2.53E-15	2.13E-18	4.57E-18
Malathion	9.39E-15	2.89E+00	1.80E+03	2.31E-01	2.16E-15	1.82E-18	3.91E-18
Methyl ethyl ketone	1.16E-12	2.60E-01	4.50E+01	1.36E+01	1.58E-11	1.32E-14	2.85E-14
4-Methylphenol	1.05E-12	1.94E+00	4.90E+01	2.53E+00	2.66E-12	2.24E-15	4.81E-15
Monomethyl hydrazine	7.37E-09	-3.08E+00	5.03E-01	1.15E+02	8.46E-07	7.10E-10	1.53E-09
Naphthalene	1.24E-13	3.35E+00	8.71E+02	9.94E-01	1.23E-13	1.04E-16	2.23E-16
Naphthalene carbonitrile	6.57E-10	3.35E+00	8.71E+02	9.94E-01	6.53E-10	5.48E-13	1.18E-12
n-Nitrosodimethylamine	7.49E-12	-6.80E-01	1.00E-01	5.84E+02	4.38E-09	3.67E-12	7.90E-12
PAHs							
Acenaphthalene	2.99E-11	4.07E+00	2.50E+03	1.18E+00	3.53E-11	2.96E-14	6.38E-14
Acenaphthene	2.99E-11	3.92E+00	4.60E+03	4.95E-01	1.48E-11	1.24E-14	2.67E-14
Benzo(a)pyrene	6.00E-11	6.42E+00	5.50E+06	3.40E-02	2.04E-12	1.71E-15	3.68E-15
Chrysene	6.00E-12	5.79E+00	2.00E+05	3.06E-01	1.83E-12	1.54E-15	3.31E-15
Dibenzo(a,h)anthracene	6.00E-11	6.50E+00	3.30E+06	6.52E-02	3.91E-12	3.28E-15	7.07E-15
Fluoranthene	6.00E-11	5.22E+00	3.80E+04	6.95E-01	3.52E-11	2.96E-14	6.36E-14
Fluorene	6.00E-12	4.38E+00	7.30E+03	6.95E-01	4.17E-12	3.50E-15	7.53E-15
Phenanthrene	2.34E-14	4.57E+00	1.40E+04	5.06E-01	1.18E-14	9.92E-18	2.13E-17
Pyrene	1.20E-10	5.18E+00	3.80E+04	5.47E-01	6.56E-11	5.51E-14	1.18E-13
Parathion	1.49E-14	3.81E+00	3.66E+03	5.14E-01	7.64E-15	6.41E-18	1.38E-17
Pentachlorobenzene	7.37E-12	5.08E+00	1.30E+04	1.34E+00	9.87E-12	8.28E-15	1.78E-14
Phenol	1.18E-13	1.46E+00	1.40E+01	6.15E+00	7.25E-13	6.08E-16	1.31E-15
Quinoline	6.76E-12	2.03E+00	7.90E+01	1.72E+00	1.16E-11	9.73E-15	2.09E-14
Tetrachlorobenzene	3.62E-12	4.37E+00	1.60E+03	3.12E+00	1.13E-11	9.47E-15	2.04E-14
Trichlorobenzene	1.83E-12	3.98E+00	9.20E+03	2.75E-01	5.03E-13	4.23E-16	9.09E-16
Unsym. dimethyl hydrazine	2.91E-08	-2.42E+00	2.00E-01	2.89E+02	8.39E-06	7.05E-09	1.52E-08
Vapona	5.87E-14	1.40E+00	1.38E+02	6.03E-01	3.54E-14	2.97E-17	6.39E-17

117	B	C	AX	AY	AZ	BA	BB	BC
118	BASE CASE							
177		TABLE 13						
178	INORGANICS							
179	Arsenic	7.92E-10			7.20E-04	5.70E-13	4.79E-16	1.03E-15
180	Cadmium	4.59E-12			1.80E-02	8.26E-14	6.94E-17	1.49E-16
181	Mercury	2.97E-11			2.40E-02	7.12E-13	5.98E-16	1.29E-15

ADULT CHILD
 1.42E-02 1.42E-02 SOIL ORGANIC CARBON CONTENT
 6.53E-02 3.11E-02 INGESTION RATE ,Kg/day
 7.00E+01 1.55E+01 BODY WEIGHT, KG
 9.00E-01 9.00E-01 FRACTION OF CARROTS HOME GROWN

$\log(RCF-0.82) = 0.77 \log Kow - 1.52$
 RUF = RCF

(Koc*Foc)

Cplant = RUF*Csoil

EDI = C plant * ADICAR * HG / ADWT

EDI (total) = DI tomato + DI lettuce + DI carrot

117	B	C	BE	BF	BG	BH
118	BASE CASE	TABLE 14	TOTAL VEGETABLE CONSUMPTION			
119			(carrots, lettuce, and tomatoes)			
120						
121						
122						
123		18-Jun-91				
124		15:15:33				
125						
126						
127						
128						
129						
130	ORGANICS					
131	Acetonitrile	6.15E-11	6.25E-11	1.32E-10	1.34E-10	
132	Aldrin	3.41E-17	3.48E-17	7.33E-17	7.48E-17	
133	Aniline	1.93E-13	2.04E-13	4.11E-13	4.33E-13	
134	Atrazine	7.08E-16	7.73E-16	1.52E-15	1.64E-15	
135	Benzaldehyde	4.79E-14	5.26E-14	1.02E-13	1.11E-13	
136	Benzo(a)pyrene	2.79E-13	2.79E-13	5.50E-13	5.94E-13	
137	Benzoic Acid	1.72E-14	1.94E-14	3.67E-14	4.09E-14	
138	Benzothiazole	4.76E-13	5.26E-13	1.02E-12	1.11E-12	
139	Bis(2-ethylhexyl)phthalate	1.47E-16	1.67E-16	3.13E-16	3.52E-16	
140	Carbazole	1.15E-15	1.18E-15	2.47E-15	2.52E-15	
141	4-Chloroaniline	7.73E-16	8.73E-16	1.66E-15	1.85E-15	
142	4-Chlorobiphenyl	3.54E-17	4.09E-17	7.55E-17	8.60E-17	
143	4,4'-Chlorobiphenyl	5.28E-17	6.61E-17	1.13E-16	1.38E-16	
144	Chloroethane	2.03E-18	2.69E-18	4.37E-18	5.60E-18	
145	Dibenzofuran	5.51E-15	6.04E-15	1.18E-14	1.28E-14	
146	1,2-Dichloroethane	2.30E-15	2.73E-15	4.94E-15	5.75E-15	
147	Dieldrin	3.76E-15	3.86E-15	8.09E-15	8.29E-15	
148	Hexachlorobenzene	4.21E-16	4.28E-16	9.06E-16	9.20E-16	
149	Hydrazine	1.04E-14	1.18E-14	2.25E-14	2.50E-14	
150	Lindane	1.43E-08	1.45E-08	3.06E-08	3.11E-08	
151	Malathion	2.19E-18	2.43E-18	4.70E-18	5.15E-18	
152	Methyl ethyl ketone	2.24E-18	2.89E-18	4.80E-18	6.01E-18	
153	4-Methylphenol	1.48E-14	1.51E-14	3.18E-14	3.24E-14	
154	Monomethyl hydrazine	2.38E-15	2.48E-15	5.11E-15	5.31E-15	
155	Naphthalene	1.69E-09	1.71E-09	3.59E-09	3.64E-09	
156	Naphthalene carbonitrile	1.05E-16	1.15E-16	2.27E-16	2.45E-16	
157	n-Nitrosodimethylamine	5.58E-13	6.09E-13	1.20E-12	1.30E-12	
158	PAHs	3.66E-12	3.72E-12	7.87E-12	7.99E-12	
159	Acenaphthalene	2.96E-14	3.20E-14	6.36E-14	6.81E-14	
160	Acenaphthene	1.26E-14	1.48E-14	2.72E-14	3.12E-14	
161	Benzo(a)pyrene	1.83E-15	5.79E-15	3.89E-15	1.13E-14	
162	Chrysene	1.54E-15	1.95E-15	3.30E-15	4.08E-15	
163	Dibenzo(a,h)anthracene	3.38E-15	7.36E-15	7.23E-15	1.46E-14	
164	Fluoranthene	2.94E-14	3.37E-14	6.31E-14	7.14E-14	
165	Fluorene	3.50E-15	3.94E-15	7.52E-15	8.36E-15	
166	Phenanthrene	9.94E-18	1.16E-17	2.14E-17	2.45E-17	
167	Pyrene	5.48E-14	6.35E-14	1.18E-13	1.34E-13	
168	Parathion	6.55E-18	7.62E-18	1.41E-17	1.61E-17	
169	Pentachlorobenzene	8.20E-15	8.80E-15	1.76E-14	1.88E-14	
170	Phenol	6.37E-16	6.54E-16	1.37E-15	1.40E-15	
171	Quinoline	1.06E-14	1.12E-14	2.27E-14	2.39E-14	
172	Tetrachlorobenzene	9.37E-15	9.74E-15	2.01E-14	2.09E-14	
173	Trichlorobenzene	4.40E-16	5.67E-16	9.44E-16	1.18E-15	
174	Unsym. dimethyl hydrazine	8.55E-09	8.68E-09	1.83E-08	1.86E-08	
175	Vapona	4.92E-17	5.38E-17	1.05E-16	1.14E-16	

ROCKY MTN ARSENAL - FARMER SCENARIO - HYDRAZINE WASTESTREAM 18-JUN-91

117	B	C	BE	BF	BG	BH
118	BASE CASE		TABLE 14			
177						
178	INORGANICS					
179	Arsenic		2.47E-15	5.45E-14	4.51E-15	1.01E-13

117	B	C	TABLE 15 SOIL/DUST INGESTION CHILD	BJ	BK	BL	BM
118	BASE CASE						
119							
120							
121							
122							
123		18-Jun-91 15:15:33	-----AVERAGE-----	EDJ ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL .1M mg/Kg	-----MAXIMUM----- C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDJ ESTIMATED DAILY INTAKE mg/Kg/day
124							
125							
126							
127							
128							
129							
130	ORGANICS						
131	Acetonitrile		4.73E-09	6.11E-14	4.80E-09	6.19E-14	
132	Aldrin		7.35E-15	9.48E-20	7.45E-15	9.62E-20	
133	Aniline		2.66E-10	3.43E-15	2.70E-10	3.48E-15	
134	Atrazine		1.64E-12	2.12E-17	1.67E-12	2.15E-17	
135	Benzaldehyde		1.21E-10	1.56E-15	1.23E-10	1.59E-15	
136	Benzofuran		5.89E-10	7.60E-15	5.98E-10	7.71E-15	
137	Benzoic Acid		5.94E-11	7.66E-16	6.02E-11	7.77E-16	
138	Benzonitrile		1.29E-09	1.67E-14	1.31E-09	1.70E-14	
139	Benzothiazole		5.52E-13	7.12E-18	5.60E-13	7.23E-18	
140	Bis(2-ethylhexyl)phthalate		3.26E-13	4.20E-18	3.31E-13	4.26E-18	
141	Carbazole		2.66E-12	3.43E-17	2.70E-12	3.48E-17	
142	4-Chloroaniline		1.52E-13	1.97E-18	1.55E-13	1.99E-18	
143	4-Chlorobiphenyl		3.75E-13	4.84E-18	3.81E-13	4.91E-18	
144	4,4'-Chlorobiphenyl		1.89E-14	2.44E-19	1.92E-14	2.47E-19	
145	Chloroethane		1.34E-11	1.74E-16	1.36E-11	1.76E-16	
146	Dibenzofuran		1.18E-11	1.53E-16	1.20E-11	1.55E-16	
147	1,2-Dichloroethane		1.36E-12	1.76E-17	1.38E-12	1.78E-17	
148	Dieldrin		1.35E-14	1.74E-19	1.37E-14	1.77E-19	
149	Hexachlorobenzene		3.57E-11	4.60E-16	3.62E-11	4.67E-16	
150	Hydrazine		4.61E-08	5.94E-13	4.67E-08	6.03E-13	
151	Lindane		6.27E-15	8.09E-20	6.36E-15	8.20E-20	
152	Malathion		1.85E-14	2.39E-19	1.88E-14	2.42E-19	
153	Methyl ethyl ketone		2.29E-12	2.95E-17	2.32E-12	2.99E-17	
154	4-Methylphenol		2.08E-12	2.68E-17	2.11E-12	2.72E-17	
155	Monomethyl hydrazine		1.45E-08	1.87E-13	1.47E-08	1.90E-13	
156	Naphthalene		2.45E-13	3.16E-18	2.48E-13	3.21E-18	
157	Naphthalene carbonitrile		1.29E-09	1.67E-14	1.31E-09	1.70E-14	
158	n-Nitrosodimethylamine		1.48E-11	1.91E-16	1.50E-11	1.93E-16	
159	PAHS						
160	Acenaphthalene		5.89E-11	7.60E-16	5.98E-11	7.71E-16	
161	Acenaphthene		5.89E-11	7.60E-16	5.98E-11	7.71E-16	
162	Benzo(a)pyrene		1.18E-10	1.53E-15	1.20E-10	1.55E-15	
163	Chrysene		1.18E-11	1.53E-16	1.20E-11	1.55E-16	
164	Dibenzo(a,h)anthracene		1.18E-10	1.53E-15	1.20E-10	1.55E-15	
165	Fluoranthene		1.18E-10	1.53E-15	1.20E-10	1.55E-15	
166	Fluorene		1.18E-11	1.53E-16	1.20E-11	1.55E-16	
167	Phenanthrene		4.61E-14	5.94E-19	4.67E-14	6.03E-19	
168	Pyrene		2.37E-10	3.05E-15	2.40E-10	3.10E-15	
169	Parathion		2.93E-14	3.78E-19	2.97E-14	3.84E-19	
170	Pentachlorobenzene		1.45E-11	1.87E-16	1.47E-11	1.90E-16	
171	Phenol		2.32E-13	3.00E-18	2.36E-13	3.04E-18	
172	Quinoline		1.33E-11	1.72E-16	1.35E-11	1.74E-16	
173	Tetrachlorobenzene		7.14E-12	9.21E-17	7.24E-12	9.34E-17	
174	Trichlorobenzene		3.61E-12	4.66E-17	3.67E-12	4.73E-17	
175	Unsym. dimethyl hydrazine		5.73E-08	7.39E-13	5.81E-08	7.50E-13	
176	Vapona		1.16E-13	1.49E-18	1.17E-13	1.52E-18	

18-Jun-91
15:15:33

-----AVERAGE-----
-----MAXIMUM-----

C soil
CALCULATED
CONC IN
SOIL
.1M
mg/Kg

ED1
ESTIMATED
DAILY
INTAKE
mg/Kg/day

C soil
CALCULATED
CONC IN
SOIL
.1M
mg/Kg

ED1
ESTIMATED
DAILY
INTAKE
mg/Kg/day

117	B	C	BJ	BK	BL	BM
118	BASE CASE		TABLE 15			
177						
178	INORGANICS					
179	Arsenic		1.56E-09	2.01E-14	1.58E-09	2.04E-14
180	Cadmium		9.05E-12	1.17E-16	9.18E-12	1.18E-16
181	Mercury		5.85E-11	7.55E-16	5.94E-11	7.66E-16
182						
183						
184						
185						
186						
187						

0.2 Soil/dust ingestion rate (g/day)
 15.5 Body weight (Kg)
 365 days/yr
 365000 g/Kg*day/yr

$$EDI = C_{soil} * SIR * EF / BW / CF$$

117 B	C	TABLE 16 SOIL INGESTION ADULT	BO	BP	BQ	BR
BASE CASE						
18-Jun-91 15:15:33						
				</		

117	B	C	BO	BP	BQ	BR
118	BASE CASE					
177		TABLE 16				
178	INORGANICS					
179	Arsenic		1.56E-09	2.23E-15	1.58E-09	2.26E-15
180	Cadmium		9.05E-12	1.29E-17	9.18E-12	1.31E-17
181	Mercury		5.85E-11	8.36E-17	5.94E-11	8.48E-17

0.1 Soil ingestion rate (g/day)
70 Body weight (Kg)
365 days/yr
365000 g/Kg*day/yr

EDI = Csoil*SIR*EF/BW/CF

193

202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261	B BASE CASE	C	TABLE 17 CONTAMINANT CONCENTRATION IN GRAIN					F PUF	G Cu AVERAGE CALCULATED CONC. IN GRAIN mg/Kg	H Cu MAXIMUM CALCULATED CONC. IN GRAIN mg/Kg	
			D C soil AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	E C soil MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	E C soil MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	F PLANT UPTAKE FACTOR	G Cu AVERAGE CALCULATED CONC. IN GRAIN mg/Kg				
		18-Jun-91 15:15:33									
		ORGANICS									
		Acetonitrile	2.37E-09	2.40E-09	6.13E+01	1.45E-07	1.47E-07				
		Aldrin	3.67E-15	3.73E-15	1.99E-03	7.29E-18	7.40E-18				
		Aniline	1.33E-10	1.35E-10	1.17E+01	1.56E-09	1.58E-09				
		Atrazine	8.22E-13	8.34E-13	1.09E+00	8.92E-13	9.05E-13				
		Benzaldehyde	6.06E-11	6.15E-11	5.39E+00	3.27E-10	3.31E-10				
		Benzofuran	2.95E-10	2.99E-10	1.10E+00	3.24E-10	3.29E-10				
		Benzoic Acid	2.97E-11	3.01E-11	3.20E+00	9.50E-11	9.64E-11				
		Benzonitrile	6.47E-10	6.57E-10	4.84E+00	3.14E-09	3.18E-09				
		Benzothiazole	2.76E-13	2.80E-13	2.66E+00	7.33E-13	7.44E-13				
		Bis(2-ethylhexyl)phthalate	1.63E-13	1.65E-13	3.36E-04	5.48E-17	5.56E-17				
		Carbazole	1.33E-12	1.35E-12	4.81E-01	6.39E-13	6.49E-13				
		4-Chloroaniline	7.62E-14	7.73E-14	3.38E+00	2.57E-13	2.61E-13				
		4-Chlorobiphenyl	1.88E-13	1.90E-13	5.60E-02	1.05E-14	1.07E-14				
		4,4'-Chlorobiphenyl	9.44E-15	9.58E-15	2.26E-02	2.13E-16	2.16E-16				
		Chloroethane	6.72E-12	6.82E-12	5.32E+00	3.58E-11	3.63E-11				
		Dibenzofuran	5.91E-12	6.00E-12	1.59E-01	9.38E-13	9.52E-13				
		1,2-Dichloroethane	6.81E-13	6.91E-13	5.39E+00	3.67E-12	3.72E-12				
		Dieldrin	6.74E-15	6.84E-15	9.86E-03	6.65E-17	6.75E-17				
		Hexachlorobenzene	1.78E-11	1.81E-11	2.61E-02	4.66E-13	4.73E-13				
		Hydrazine	2.30E-08	2.34E-08	2.38E+03	5.48E-05	5.56E-05				
		Lindane	3.13E-15	3.18E-15	4.74E-01	1.49E-15	1.51E-15				
		Malathion	9.26E-15	9.39E-15	8.20E-01	7.59E-15	7.70E-15				
		Methyl ethyl ketone	1.14E-12	1.16E-12	2.75E+01	3.14E-11	3.19E-11				
		4-Methylphenol	1.04E-12	1.05E-12	2.92E+00	3.03E-12	3.07E-12				
		Monomethyl hydrazine	7.26E-09	7.37E-09	2.38E+03	1.73E-05	1.75E-05				
		Naphthalene	1.22E-13	1.24E-13	4.44E-01	5.43E-14	5.51E-14				
		Naphthalene carbonitrile	6.47E-10	6.57E-10	4.44E-01	2.87E-10	2.91E-10				
		n-Nitrosodimethylamine	7.39E-12	7.49E-12	9.65E+01	7.13E-10	7.23E-10				
		PAHs									
		Acenaphthalene	2.95E-11	2.99E-11	1.70E-01	5.00E-12	5.07E-12				
		Acenaphthene	2.95E-11	2.99E-11	2.07E-01	6.11E-12	6.19E-12				
		Benzo(a)pyrene	5.91E-11	6.00E-11	7.35E-03	4.35E-13	4.41E-13				
		Chrysene	5.91E-12	6.00E-12	1.71E-02	1.01E-13	1.02E-13				
		Dibenzo(a,h)anthracene	5.91E-11	6.00E-11	6.61E-03	3.91E-13	3.96E-13				
		Fluoranthene	5.91E-11	6.00E-11	3.65E-02	2.16E-12	2.19E-12				
		Fluorene	5.91E-12	6.00E-12	1.12E-01	6.63E-13	6.73E-13				
		Phenanthrene	2.30E-14	2.34E-14	8.70E-02	2.00E-15	2.03E-15				
		Pyrene	1.18E-10	1.20E-10	3.85E-02	4.55E-12	4.62E-12				
		Parathion	1.47E-14	1.49E-14	2.40E-01	3.52E-15	3.57E-15				
		Pentachlorobenzene	7.26E-12	7.37E-12	4.40E-02	3.20E-13	3.24E-13				
		Phenol	1.16E-13	1.18E-13	5.54E+00	6.43E-13	6.53E-13				
		Quinoline	6.66E-12	6.76E-12	2.59E+00	1.72E-11	1.75E-11				
		Tetrachlorobenzene	3.57E-12	3.62E-12	1.14E-01	4.05E-13	4.11E-13				
		Trichlorobenzene	1.81E-12	1.83E-12	1.91E-01	3.46E-13	3.51E-13				
		Unsym. dimethyl hydrazine	2.86E-08	2.91E-08	9.85E+02	2.82E-05	2.86E-05				
		Vapona	5.79E-14	5.87E-14	6.00E+00	3.47E-13	3.52E-13				

202	B	C	D	E	F	G	H
203	BASE CASE		TABLE 17				
262	INORGANICS						
263	Arsenic		7.80E-10	7.92E-10	3.30E-03	2.57E-12	2.61E-12
264	Cadmium		4.52E-12	4.59E-12	1.00E-01	4.52E-13	4.59E-13
265	Mercury		2.93E-11	2.97E-11	2.00E-01	5.89E-12	5.94E-12

Cgrain = Csoil*RUF

267
268

202	B	C	J	K	L	M	N	O	P	Q	R	S
203	BASE CASE	18-Jun-91 15:15:33	C soil AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	C soil MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	D DEPOSITION RATE g/m2/yr	PUF PLANT UPTAKE FACTOR	Cu AVERAGE CONC. DUE TO UPTAKE mg/Kg	Cu MAXIMUM CONC. DUE TO UPTAKE mg/Kg	Cs AVERAGE CONC. ON PLANT SURFACE mg/Kg	Cs MAXIMUM CONC. ON PLANT SURFACE mg/Kg	C hay AVERAGE CALCULATED CONC IN HAY mg/Kg	C hay MAXIMUM CALCULATED CONC IN HAY mg/Kg
204			2.37E-09	2.40E-09	5.76E-11	6.13E+01	1.45E-07	1.47E-07	1.30E-10	4.55E-09	1.45E-07	1.52E-07
205			3.67E-15	3.73E-15	8.94E-17	1.99E-03	7.29E-18	7.40E-18	2.02E-16	7.06E-15	2.09E-16	7.07E-15
206			1.33E-10	1.35E-10	3.24E-12	1.17E+01	1.56E-09	1.58E-09	7.31E-12	2.56E-10	1.56E-09	1.83E-09
207			8.22E-13	8.34E-13	2.00E-14	1.09E+00	8.92E-13	9.05E-13	4.51E-14	1.58E-12	9.37E-13	2.48E-12
208			6.06E-11	6.15E-11	1.47E-12	5.39E+00	3.27E-10	3.31E-10	3.33E-12	1.16E-10	3.30E-10	4.48E-10
209			2.95E-10	2.99E-10	7.17E-12	1.10E+00	3.24E-10	3.29E-10	3.33E-12	5.66E-10	3.40E-10	8.95E-10
210			2.97E-11	3.01E-11	7.22E-13	3.20E+00	9.50E-11	9.64E-11	1.62E-11	5.70E-11	9.66E-11	1.53E-10
211			6.47E-10	6.57E-10	1.58E-11	4.84E+00	3.14E-09	3.18E-09	3.56E-11	1.24E-09	3.17E-09	4.43E-09
212			2.76E-13	2.80E-13	6.72E-15	2.66E+00	7.33E-13	7.44E-13	1.52E-14	5.31E-13	7.48E-13	1.27E-12
213			1.63E-13	1.65E-13	3.96E-15	3.36E-04	5.48E-17	5.56E-17	8.95E-15	3.13E-13	9.00E-15	3.13E-13
214	ORGANICS		1.33E-12	1.35E-12	3.24E-14	4.81E-01	6.39E-13	6.49E-13	7.31E-14	2.56E-12	7.12E-13	3.21E-12
215	Acetonitrile		7.62E-14	7.73E-14	1.85E-15	3.38E+00	2.57E-13	2.61E-13	4.18E-15	1.46E-13	2.61E-13	4.07E-13
216	Aldrin		1.88E-13	1.90E-13	4.57E-15	5.60E-02	1.05E-14	1.07E-14	1.03E-14	3.61E-13	2.08E-14	3.71E-13
217	Aniline		9.44E-15	9.58E-15	2.30E-16	2.28E-02	2.13E-16	2.16E-16	5.19E-16	1.81E-14	7.32E-16	1.84E-14
218	Atrazine		6.71E-12	6.82E-12	1.64E-13	5.32E+00	3.58E-11	3.63E-11	3.69E-13	1.29E-11	3.61E-11	4.92E-11
219	Benzaldehyde		5.91E-12	6.00E-12	1.44E-13	1.59E-01	9.38E-13	9.52E-13	3.25E-13	1.14E-11	1.26E-12	1.23E-11
220	Benzofuran		6.81E-13	6.91E-13	1.66E-14	5.39E+00	3.67E-12	3.72E-12	3.74E-12	1.31E-12	3.71E-12	5.03E-12
221	Benzofuran		6.74E-15	6.84E-15	1.64E-16	9.84E-03	6.65E-17	6.75E-17	3.70E-16	1.30E-14	4.37E-16	1.30E-14
222	Benzothiazole		1.78E-11	1.81E-11	4.34E-13	2.61E-02	4.66E-13	4.73E-13	9.79E-13	3.43E-11	1.44E-12	3.47E-11
223	Bis(2-ethylhexyl)phthalate		2.30E-08	2.34E-08	5.61E-10	2.38E+03	5.48E-05	5.56E-05	1.27E-09	4.43E-08	5.48E-05	5.56E-05
224	Carbazole		3.13E-15	3.18E-15	7.63E-17	4.74E-01	1.49E-15	1.51E-15	1.72E-16	6.02E-15	1.66E-15	7.53E-15
225	4-Chloroaniline		1.14E-12	1.16E-12	2.25E-16	8.20E-01	7.59E-15	7.70E-15	5.08E-16	1.78E-14	8.10E-15	2.55E-14
226	4-Chlorobiphenyl		1.04E-12	1.05E-12	2.53E-14	2.75E+01	3.14E-11	3.19E-11	6.28E-14	2.20E-12	3.15E-11	3.41E-11
227	Chloroethane		7.26E-09	7.37E-09	1.77E-10	2.92E+00	3.03E-12	3.07E-12	5.70E-14	1.99E-12	3.08E-12	5.06E-12
228	Dieldrin		1.22E-13	1.24E-13	2.98E-15	4.44E+01	1.73E-05	1.75E-05	3.99E-10	1.40E-08	1.73E-05	1.75E-05
229	Hexachlorobenzene		6.47E-10	6.57E-10	1.58E-11	4.44E-01	5.43E-14	5.51E-14	6.72E-15	2.35E-13	6.10E-14	2.90E-13
230	Hydrazine		7.39E-12	7.49E-12	1.80E-13	9.65E+01	2.87E-10	2.91E-10	3.56E-11	1.24E-09	3.23E-10	1.54E-09
231	Lindane						7.13E-10	7.23E-10	4.06E-13	1.42E-11	7.13E-10	7.37E-10
232	Malathion											
233	Methyl ethyl ketone											
234	4-Nethylphenol											
235	Monomethyl hydrazine											
236	Naphthalene											
237	Naphthalene carbonitrile											
238	n-Nitrosodimethylamine											
239	PAHs											
240	Acenaphthalene		2.95E-11	2.99E-11	7.17E-13	1.70E-01	5.00E-12	5.07E-12	1.62E-12	5.66E-11	6.62E-12	6.17E-11
241	Acenaphthene		2.95E-11	2.99E-11	7.17E-13	2.07E-01	6.11E-12	6.19E-12	1.62E-12	5.66E-11	7.72E-12	6.28E-11
242	Benzo(a)pyrene		5.91E-11	6.00E-11	1.44E-12	7.35E-02	4.35E-13	4.41E-13	3.25E-12	1.14E-10	3.68E-12	1.14E-10
243	Chrysene		5.91E-11	6.00E-11	1.44E-13	1.71E-02	1.01E-13	1.02E-13	3.25E-13	1.14E-11	4.26E-13	1.15E-11
244	Dibenzo(a,h)anthracene		5.91E-11	6.00E-11	1.44E-12	6.61E-03	3.91E-13	3.96E-13	3.25E-13	1.14E-10	3.64E-12	1.14E-10
245	Fluoranthene		5.91E-11	6.00E-11	1.44E-13	3.65E-02	2.16E-12	2.19E-12	3.25E-12	1.14E-10	5.41E-12	1.16E-10
246	Fluorene		5.91E-12	6.00E-12	1.44E-13	1.12E-01	6.63E-13	6.73E-13	3.25E-12	1.14E-11	9.88E-13	1.20E-11
247	Phenanthrene		2.30E-14	2.34E-14	5.61E-16	8.70E-02	2.00E-15	2.03E-15	1.27E-15	4.43E-14	3.27E-15	4.63E-14
248	Pyrene		1.18E-10	1.20E-10	2.88E-12	3.85E-02	3.52E-15	3.57E-15	1.27E-15	2.27E-10	1.11E-11	2.32E-10
249	Parathion		1.47E-14	1.49E-14	3.57E-16	2.40E-01	3.52E-15	4.62E-12	6.50E-12	2.82E-14	4.32E-15	3.17E-14
250	Pentachlorobenzene		7.26E-12	7.37E-12	1.77E-13	4.40E-02	3.20E-13	3.24E-13	3.99E-13	1.40E-11	7.19E-13	1.43E-11
251	Phenol		1.16E-13	1.18E-13	2.83E-15	5.54E+00	6.43E-13	6.53E-13	3.99E-13	2.23E-13	6.50E-13	8.76E-13
252	Quinoline		6.66E-12	6.76E-12	1.62E-13	2.59E+00	1.72E-11	1.75E-11	3.66E-13	1.28E-11	1.76E-11	3.03E-11
253	Tetrachlorobenzene		3.57E-12	3.62E-12	8.69E-14	1.14E-01	4.05E-13	4.11E-13	1.96E-13	6.86E-12	6.01E-13	7.27E-12
254	Trichlorobenzene		1.81E-12	1.83E-12	4.40E-14	1.91E-01	3.46E-13	3.51E-13	9.93E-14	3.47E-12	4.45E-13	3.82E-12
255	Unsym. dimethyl hydrazine		2.86E-08	2.91E-08	6.97E-10	9.85E+02	2.82E-05	2.86E-05	1.57E-09	5.50E-08	2.82E-05	2.87E-05
256	Vapona		5.79E-14	5.87E-14	1.41E-15	6.00E+00	3.47E-13	3.52E-13	3.18E-15	1.11E-13	3.50E-13	4.64E-13

202	B	C	J	K	L	M	N	O	P	Q	R	S
203	BASE CASE		TABLE 18									
262	INORGANICS											
263	Arsenic		7.80E-10	7.92E-10	1.90E-11	2.00E-01	1.56E-10	1.58E-10	4.29E-11	1.50E-09	1.99E-10	1.66E-09
264	Cadmium		4.52E-12	4.59E-12	1.10E-13	5.50E-01	2.49E-12	2.52E-12	2.48E-13	8.70E-12	2.74E-12	1.12E-11
265	Mercury		2.93E-11	2.97E-11	7.12E-13	2.30E-01	6.73E-12	6.83E-12	1.61E-12	5.62E-11	8.34E-12	6.31E-11
266							6.35E-01 r hay					
267							5.78E-07 k hay, 1/s					
268							2.72E+06 t hay, s					
269							3.50E-01 Y hay, Kg/M2					
270							2.49E+06 SDF hay, sec*mg/Kg					
271							3.15E+07 sec/yr					
272							1.00E+03 mg/g					
273												
274												
275												
276												
277												
278												
279												
280												
281												

$$SDF = r * (1 - e^{-kt})$$

Y*K

$$Cs = SDF * Deposition * mgg / secyr$$

$$Cu = RUF * Csoil$$

$$C \text{ hay} = Cs + Cu$$

202	B	C	U	V	W	X	Y	Z	AA	AB	AC	AD
203	BASE CASE		TABLE 19									
262	INORGANICS											
263	Arsenic		7.80E-10	7.92E-10	1.90E-11	2.30E-01	1.79E-10	1.82E-10	7.27E-12	2.55E-10	1.87E-10	4.37E-10
264	Cadmium		4.52E-12	4.59E-12	1.10E-13	1.50E-01	6.79E-13	6.88E-13	4.22E-14	1.48E-12	7.21E-13	2.16E-12
265	Mercury		2.93E-11	2.97E-11	7.12E-13	2.20E-02	6.44E-13	6.53E-13	2.73E-13	9.55E-12	9.16E-13	1.02E-11
266												
267					4.40E-01 r corn							
268					5.78E-07 k corn, 1/s							
269					1.12E+07 t corn, s							
270					1.80E+00 Y corn, Kg/M2							
271					4.22E+05 SDF corn, sec/mg/Kg							
272					3.15E+07 sec/yr							
273					1.00E+03 mg/g							
274												
275												
276												
277												
278												
279												
280												

$SDF = r * (1 - e^{-kt})$
 $Y * K$
 $Cs = SDF * Deposition * mgg / secyr$
 $Cu = RUF * Csoil$
 $C \text{ corn} = Cs + Cu$

202	B	C	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
203	204	205	206	207	208	209	210	211	212	213	214	215
216	217	218	219	220	221	222	223	224	225	226	227	228
229	230	231	232	233	234	235	236	237	238	239	240	241
242	243	244	245	246	247	248	249	250	251	252	253	254
255	256	257	258	259	260	261	262	263	264	265	266	267
268	269	270	271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290	291	292	293
294	295	296	297	298	299	300	301	302	303	304	305	306
307	308	309	310	311	312	313	314	315	316	317	318	319
320	321	322	323	324	325	326	327	328	329	330	331	332
333	334	335	336	337	338	339	340	341	342	343	344	345
346	347	348	349	350	351	352	353	354	355	356	357	358
359	360	361	362	363	364	365	366	367	368	369	370	371
372	373	374	375	376	377	378	379	380	381	382	383	384
385	386	387	388	389	390	391	392	393	394	395	396	397
398	399	400	401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420	421	422	423
424	425	426	427	428	429	430	431	432	433	434	435	436
437	438	439	440	441	442	443	444	445	446	447	448	449
450	451	452	453	454	455	456	457	458	459	460	461	462
463	464	465	466	467	468	469	470	471	472	473	474	475
476	477	478	479	480	481	482	483	484	485	486	487	488
489	490	491	492	493	494	495	496	497	498	499	500	501
502	503	504	505	506	507	508	509	510	511	512	513	514
515	516	517	518	519	520	521	522	523	524	525	526	527
528	529	530	531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550	551	552	553
554	555	556	557	558	559	560	561	562	563	564	565	566
567	568	569	570	571	572	573	574	575	576	577	578	579
580	581	582	583	584	585	586	587	588	589	590	591	592
593	594	595	596	597	598	599	600	601	602	603	604	605
606	607	608	609	610	611	612	613	614	615	616	617	618
619	620	621	622	623	624	625	626	627	628	629	630	631
632	633	634	635	636	637	638	639	640	641	642	643	644
645	646	647	648	649	650	651	652	653	654	655	656	657
658	659	660	661	662	663	664	665	666	667	668	669	670
671	672	673	674	675	676	677	678	679	680	681	682	683
684	685	686	687	688	689	690	691	692	693	694	695	696
697	698	699	700	701	702	703	704	705	706	707	708	709
710	711	712	713	714	715	716	717	718	719	720	721	722
723	724	725	726	727	728	729	730	731	732	733	734	735
736	737	738	739	740	741	742	743	744	745	746	747	748
749	750	751	752	753	754	755	756	757	758	759	760	761
762	763	764	765	766	767	768	769	770	771	772	773	774
775	776	777	778	779	780	781	782	783	784	785	786	787
788	789	790	791	792	793	794	795	796	797	798	799	800
801	802	803	804	805	806	807	808	809	810	811	812	813
814	815	816	817	818	819	820	821	822	823	824	825	826
827	828	829	830	831	832	833	834	835	836	837	838	839
840	841	842	843	844	845	846	847	848	849	850	851	852
853	854	855	856	857	858	859	860	861	862	863	864	865
866	867	868	869	870	871	872	873	874	875	876	877	878
879	880	881	882	883	884	885	886	887	888	889	890	891
892	893	894	895	896	897	898	899	900	901	902	903	904
905	906	907	908	909	910	911	912	913	914	915	916	917
918	919	920	921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940	941	942	943
944	945	946	947	948	949	950	951	952	953	954	955	956
957	958	959	960	961	962	963	964	965	966	967	968	969
970	971	972	973	974	975	976	977	978	979	980	981	982
983	984	985	986	987	988	989	990	991	992	993	994	995
996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008
1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021
1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034
1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047
1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073
1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086
1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099
1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112
1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125
1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138
1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151
1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164
1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177
1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190
1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203
1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216
1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229
1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242
1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255
1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268
1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281
1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294
1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307
1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320
1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333
1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346
1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359
1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372
1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385
1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398
1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411
1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424
1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437
1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450
1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463
1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476
1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489
1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502
1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515
1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528
1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541
1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554
1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565	1566	1567
1568	1569	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580
1581	1582	1583	1584	1585	1586	1587	1588	1589	1590	1591	1592	1593
1594	1595	1596	1597	1598	1599	1600	1601	1602	1603	1604	1605	1606
1607	1608	1609										

202	B	C	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
203	BASE CASE		TABLE 20									
262	INORGANICS											
263	Arsenic		1.56E-09	1.58E-09	1.90E-11	1.30E-02	2.03E-11	2.06E-11	6.84E-11	2.40E-09	8.87E-11	2.42E-09
264	Cadmium		9.05E-12	9.18E-12	1.10E-13	5.50E-01	4.98E-12	5.05E-12	3.97E-13	1.39E-11	5.37E-12	1.89E-11
265	Mercury		5.85E-11	5.94E-11	7.12E-13	5.90E-01	3.45E-11	3.50E-11	2.57E-12	8.98E-11	3.71E-11	1.25E-10
266												
267						6.71E-02	r grass					
268						5.78E-07	k grass, 1/s					
269						3.02E+06	t grass, s					
270						2.41E-02	Y grass, Kg/M2	Y				
271						3.97E+06	SDF grass, sec*mg/kg	SDF				
272						3.15E+07	sec/yr	secyr				
273						1.00E+03	mg/g	mgg				
274												
275												
276												
277												
278												
279												
280												
281												

$$SDF = \frac{-kt}{Y * k} \left(1 - e^{-Y * k} \right)$$

Cs = SDF*Deposition*mgg/secyr
 Cu = RUF*Csoil
 U grass = Cs+Cu

202	B	C	AQ	AR	AS	AT	AU	AV	AW
203	BASE CASE	TABLE 21	MILK INGESTION - AVERAGE						
204									
205									
206									
207									
208		18-Jun-91							
209		15:15:33							
210									
211									
212									
213									
214	ORGANICS								
215	Acetonitrile	1.30E-07			3.72E-09	1.09E-14		4.74E-17	2.74E-16
216	Aldrin	4.79E-17			2.04E-01	2.19E-16		9.56E-19	5.52E-18
217	Aniline	1.40E-09			6.46E-08	2.03E-15		8.85E-18	5.11E-17
218	Atrazine	8.12E-13			3.89E-06	7.09E-17		3.09E-19	1.78E-18
219	Benzaldehyde	2.95E-10			2.45E-07	1.62E-15		7.07E-18	4.08E-17
220	Benzo(furan)	2.95E-10			3.80E-06	2.52E-14		1.10E-16	6.34E-16
221	Benzoic Acid	8.58E-11			6.03E-07	1.16E-15		5.06E-18	2.92E-17
222	Benzonitrile	2.83E-09			2.95E-07	1.87E-14		8.17E-17	4.72E-16
223	Benzothiazole	6.63E-13			8.32E-07	1.24E-17		5.39E-20	3.11E-19
224	Bis(2-ethylhexyl)phthalate	1.88E-15			4.37E+00	1.84E-13		8.03E-16	4.64E-15
225	Carbazole	5.90E-13			1.58E-05	2.10E-16		9.15E-19	5.28E-18
226	4-Chloroaniline	2.32E-13			5.50E-07	2.87E-18		1.25E-20	7.21E-20
227	4-Chlorobiphenyl	1.16E-14			6.46E-04	1.68E-16		7.30E-19	4.22E-18
228	4,4'-Chlorobiphenyl	2.98E-16			3.09E-03	2.07E-17		9.01E-20	5.20E-19
229	Chloroethane	3.23E-11			2.51E-07	1.82E-16		7.93E-19	4.58E-18
230	Dibenzofuran	9.11E-13			1.07E-04	2.19E-15		9.55E-18	5.51E-17
231	1,2-Dichloroethane	3.31E-12			2.45E-07	1.82E-17		7.95E-20	4.59E-19
232	Dieldrin	1.36E-16			1.29E-02	3.92E-17		1.71E-19	9.87E-19
233	Hexachlorobenzene	6.20E-13			2.40E-03	3.34E-14		1.45E-16	8.40E-16
234	Hydrazine	4.93E-05			6.76E-12	7.48E-15		3.26E-17	1.88E-16
235	Lindane	1.37E-15			1.62E-05	5.00E-19		2.18E-21	1.26E-20
236	Malathion	6.93E-15			6.31E-06	9.82E-19		4.28E-21	2.47E-20
237	Methyl ethyl ketone	2.83E-11			1.48E-08	9.40E-18		4.09E-20	2.36E-19
238	4-Methylphenol	2.73E-12			7.08E-07	4.35E-17		1.89E-19	1.09E-18
239	Monomethyl hydrazine	1.55E-05			6.76E-12	2.36E-15		1.03E-17	5.94E-17
240	Naphthalene	5.03E-14			1.82E-05	2.05E-17		8.95E-20	5.17E-19
241	Naphthalene carbonitrile	2.66E-10			1.82E-05	1.09E-13		4.73E-16	2.73E-15
242	n-Nitrosodimethylamine	6.41E-10			1.70E-09	2.45E-17		1.07E-19	6.15E-19
243	PAHs								
244	Acenaphthalene	4.83E-12			9.55E-05	1.04E-14		4.51E-17	2.60E-16
245	Acenaphthene	5.83E-12			6.76E-05	8.84E-15		3.85E-17	2.22E-16
246	Benzo(a)pyrene	1.06E-12			2.14E-02	5.07E-13		2.21E-15	1.28E-14
247	Chrysene	1.57E-13			5.01E-03	1.77E-14		7.71E-17	4.45E-16
248	Dibenzo(a,h)anthracene	1.02E-12			2.57E-02	5.87E-13		2.56E-15	1.48E-14
249	Fluoranthene	2.61E-12			1.35E-03	7.90E-14		3.44E-16	1.99E-15
250	Fluorene	6.63E-13			1.95E-04	2.90E-15		1.26E-17	7.30E-17
251	Phenanthrene	2.06E-15			3.02E-04	1.40E-17		6.09E-20	3.52E-19
252	Pyrene	5.43E-12			1.23E-03	1.50E-13		6.53E-16	3.77E-15
253	Parathion	3.33E-15			5.25E-05	3.92E-18		1.71E-20	9.87E-20
254	Pentachlorobenzene	3.69E-13			9.77E-04	8.10E-15		3.53E-17	2.04E-16
255	Phenol	5.80E-13			2.34E-07	3.05E-18		1.33E-20	7.68E-20
256	Quinoline	1.56E-11			8.71E-07	3.05E-16		1.33E-18	7.66E-18
257	Tetrachlorobenzene	4.05E-13			1.91E-04	1.73E-15		7.55E-18	4.36E-17
258	Trichlorobenzene	3.31E-13			7.76E-05	5.78E-16		2.52E-18	1.45E-17
259	Unsym. dimethyl hydrazine	2.54E-05			3.09E-11	1.76E-14		7.68E-17	4.43E-16
260	Vapona	3.13E-13			2.04E-07	1.44E-18		6.25E-21	3.61E-20
261									

202	B	C	AQ	AR	AS	AT	AU	AV	AW
203	BASE CASE		TABLE 21						
262	INORGANICS								
263	Arsenic		6.89E-11		6.00E-03	9.28E-12		4.04E-14	2.34E-13
264	Cadmium		8.54E-13		1.00E-03	1.92E-14		8.35E-17	4.82E-16
265	Mercury		4.84E-12		4.50E-04	4.89E-14		2.13E-16	1.23E-15
266									
267		ADULT		CHILD					
268		0.55		DAILY INTAKE OF GRAIN % of TOTAL					DI grain
269		0.175		DAILY INTAKE OF HAY % of TOTAL					DI hay
270		0		DAILY INTAKE OF GRASS % of TOTAL					DI grass
271		0.175		DAILY INTAKE OF CORN SILAGE % of TOTAL					DI corn
272		0.02		SOIL INGESTION % of GRASS INTAKE					SI
273		22.45		TOTAL FEED INTAKE Kg/day					TI
274		0.305		0.39 CONSUMPTION RATE OF MILK PER DAY Kg/day					CRM
275		0.011		0.016 CONSUMPTION RATE OF MILK FAT PER DAY Kg/day					CRMf
276		1		1 FRACTION OF MILK CONSUMED FROM RURAL SOURCE.					HG
277		70		15.5 BODY WEIGHT Kg					WT
278									
279									

$$C \text{ diet} = (SUM(C \text{ feed} * DI * X) + (C \text{ soil} * SI * DI * GRASS)) / ((1 + (SI * DI * GRASS)))$$

202 - B	BASE CASE	C	AY	AZ	BA	BB	BC	BD	BE
203	TABLE 22								
204	MILK INGESTION - MAXIMUM								
205									
206									
207									
208	18-Jun-91								
209	15:15:33								
210									
211									
212									
213									
214	ORGANICS								
215	Acetonitrile	1.33E-07	C diet	DUFm	TC	C milk	C milkfat	EDI	EDI
216	Aldrin	1.45E-15	MAXIMUM	DIET	TRANSFER	MAXIMUM	MAXIMUM	ADULT	CHILD
217	Aniline	1.47E-09	UPTAKE	MILK	COEFFICIENT	CALCULATED	CALCULATED	MAXIMUM	MAXIMUM
218	Atrazine	1.14E-12				CONC IN	CONC IN	ESTIMATED	ESTIMATED
219	Benzaldehyde	3.22E-10				MILK	MILK FAT	DAILY	DAILY
220	Benzofuran	4.12E-10				mg/Kg	mg/Kg	INTAKE	INTAKE
221	Benzoic Acid	9.84E-11						mg/Kg/day	mg/Kg/day
222	Benzonitrile	3.12E-09							
223	Benzothiazole	7.78E-13							
224	Bis(2-ethylhexyl)phthalate	6.41E-14							
225	Carbazole	1.11E-12							
226	4-Chloroaniline	2.65E-13							
227	4-Chlorobiphenyl	8.34E-14							
228	4,4'-Chlorobiphenyl	3.91E-15							
229	Chloroethane	3.53E-11							
230	Dibenzofuran	3.18E-12							
231	1,2-Dichloroethane	3.62E-12							
232	Dieldrin	2.71E-15							
233	Hexachlorobenzene	7.44E-12							
234	Hydrazine	5.00E-05							
235	Lindane	2.59E-15							
236	Malathion	1.06E-14							
237	Methyl ethyl ketone	2.91E-11							
238	4-Methylphenol	3.17E-12							
239	Monomethyl hydrazine	1.58E-05							
240	Naphthalene	9.78E-14							
241	Naphthalene carbonitrile	5.17E-10							
242	n-Nitrosodimethylamine	6.54E-10							
243	PAHs								
244	Acenaphthalene	1.62E-11							
245	Acenaphthene	1.72E-11							
246	Benzo(a)pyrene	2.37E-11							
247	Chrysene	2.42E-12							
248	Dibenzo(a,h)anthracene	2.36E-11							
249	Fluoranthene	2.52E-11							
250	Fluorene	2.93E-12							
251	Phenanthrene	1.09E-14							
252	Pyrene	5.07E-11							
253	Parathion	8.97E-15							
254	Pentachlorobenzene	3.15E-12							
255	Phenol	6.33E-13							
256	Quinoline	1.83E-11							
257	Tetrachlorobenzene	1.77E-12							
258	Trichlorobenzene	1.03E-12							
259	Unsym. dimethyl hydrazine	2.58E-05							
260	Vapona	3.40E-13							
261									

202	B	C	AZ	BA	BB	BC	BD	BE
203	BASE CASE							
262	INORGANICS	TABLE 22						
263	Arsenic	3.68E-10		6.00E-03	4.96E-11		2.16E-13	1.25E-12
264	Cadmium	2.59E-12		1.00E-03	5.82E-14		2.54E-16	1.47E-15
265	Mercury	1.61E-11		4.50E-04	1.63E-13		7.08E-16	4.09E-15
266								
267	ADULT	CHILD						
268	0.55	DAILY INTAKE OF GRAIN % of TOTAL						DI grain
269	0.175	DAILY INTAKE OF HAY % of TOTAL						DI hay
270	0	DAILY INTAKE OF GRASS % of TOTAL						DI grass
271	0.175	DAILY INTAKE OF CORN SILAGE % of TOTAL						DI corn
272	0.02	SOIL INGESTION % of GRASS INTAKE						SI
273	22.45	TOTAL FEED INTAKE Kg/day						T1
274	0.305	0.39 CONSUMPTION RATE OF MILK PER DAY Kg/day						CRm
275	0.011	0.016 CONSUMPTION RATE OF MILK FAT PER DAY Kg/day						CRmf
276	1	1 FRACTION OF MILK CONSUMED FROM RURAL SOURCE.						HG
277	70	15.5 ADULT WEIGHT Kg						WT
278								
279								
280								

C diet = (SUM(C feedx*DIx)+(C soil*SI*DI GRASS))/(1+(SI*DI GRASS))

C milkfat = DUFm*C diet (dioxins)

B	C	BG	BH	BI	BJ	BK	BL	BM
		TABLE 23						
		BEEF INGESTION - AVERAGE						
202	BASE CASE	C diet	DUFb	TC	C beef	C beeffat	EDI	EDI
203		AVERAGE	DIET	TRANSFER	AVERAGE	AVERAGE	ADULT	CHILD
204		CONC IN	UP TAKE	COEFFICIENT	CONC IN	CONC IN	ESTIMATED	AVERAGE
205		DIET	Unitless	BEEF	BEEF	BEEFAT	DAILY	DAILY
206		(beef)		Day/Kg	mg/Kg	mg/Kg	INTAKE	INTAKE
207		mg/Kg					mg/Kg/day	mg/Kg/day
208	18-Jun-91							
209	15:15:33							
210								
211								
212								
213								
214	ORGANICS							
215	Acetonitrile	1.30E-07		1.15E-08	1.94E-14		1.86E-17	4.64E-17
216	Aldrin	1.84E-17		6.31E-01	1.50E-16		1.44E-19	3.59E-19
217	Aniline	1.40E-09		2.00E-07	3.62E-15		3.47E-18	8.65E-18
218	Atrazine	8.05E-13		1.20E-05	1.26E-16		1.20E-19	3.00E-19
219	Benzaldehyde	2.94E-10		7.59E-07	2.89E-18		2.77E-18	6.91E-18
220	Benzofuran	2.93E-10		1.17E-05	4.46E-14		4.27E-17	1.06E-16
221	Benzoic Acid	8.56E-11		1.86E-06	2.07E-15		1.98E-18	4.93E-18
222	Benzonitrile	2.82E-09		9.12E-07	3.34E-14		3.20E-17	7.98E-17
223	Benzothiazole	6.61E-13		2.57E-06	2.20E-17		2.11E-20	5.26E-20
224	Bis(2-ethylhexyl)phthalate	5.73E-16		1.35E+01	1.00E-13		9.59E-17	2.39E-16
225	Carbazole	5.80E-13		4.90E-05	3.68E-16		3.52E-19	8.79E-19
226	4-Chloroaniline	2.32E-13		1.70E-06	5.10E-18		4.89E-21	1.22E-20
227	4-Chlorobiphenyl	1.01E-14		2.00E-03	2.60E-16		2.49E-19	6.21E-19
228	4,4'-Chlorobiphenyl	2.22E-16		9.55E-03	2.75E-17		2.63E-20	6.57E-20
229	Chloroethane	3.22E-11		7.76E-07	3.24E-16		3.10E-19	7.74E-19
230	Dibenzofuran	8.63E-13		3.31E-04	3.71E-15		3.55E-18	8.85E-18
231	1,2-Dichloroethane	3.30E-12		7.59E-07	3.25E-17		3.11E-20	7.76E-20
232	Dieldrin	8.15E-17		3.98E-02	4.21E-17		4.03E-20	1.00E-19
233	Hexachlorobenzene	4.77E-13		7.41E-03	4.58E-14		4.39E-17	1.09E-16
234	Hydrazine	4.93E-05		2.09E-11	1.34E-14		1.28E-17	3.19E-17
235	Lindane	1.35E-15		5.01E-05	8.76E-19		8.38E-22	2.09E-21
236	Malathion	6.86E-15		1.95E-05	1.73E-18		1.66E-21	4.14E-21
237	Methyl ethyl ketone	2.83E-11		4.57E-08	1.68E-17		1.61E-20	4.00E-20
238	4-Methylphenol	2.73E-12		2.19E-06	7.74E-17		7.40E-20	1.85E-19
239	Monomethyl hydrazine	1.55E-05		2.09E-11	4.21E-15		4.03E-18	1.01E-17
240	Naphthalene	4.93E-14		5.62E-05	3.59E-17		3.44E-20	8.58E-20
241	Naphthalene carbonitrile	2.61E-10		5.62E-05	1.90E-13		1.82E-16	4.54E-16
242	n-Nitrosodimethylamine	6.41E-10		5.25E-09	4.37E-17		4.18E-20	1.04E-19
243	PAHs							
244	Acenaphthalene	4.59E-12		2.95E-04	1.76E-14		1.68E-17	4.20E-17
245	Acenaphthene	5.59E-12		2.09E-04	1.51E-14		1.45E-17	3.62E-17
246	Benzo(a)pyrene	5.81E-13		6.61E-02	4.98E-13		4.77E-16	1.19E-15
247	Chrysene	1.10E-13		1.55E-02	2.20E-14		2.11E-17	5.26E-17
248	Dibenzo(a,h)anthracene	5.42E-13		7.94E-02	5.58E-13		5.34E-16	1.33E-15
249	Fluoranthene	2.13E-12		4.17E-03	1.15E-13		1.10E-16	2.75E-16
250	Fluorene	6.16E-13		6.03E-04	4.81E-15		4.60E-18	1.15E-17
251	Phenanthrene	1.88E-15		9.33E-04	2.27E-17		2.17E-20	5.42E-20
252	Pyrene	4.48E-12		3.80E-03	2.21E-13		2.11E-16	5.27E-16
253	Parathion	3.21E-15		1.62E-04	6.75E-18		6.47E-21	1.61E-20
254	Pentachlorobenzene	3.11E-13		3.02E-03	1.22E-14		1.17E-17	2.91E-17
255	Phenol	5.79E-13		7.24E-07	5.44E-18		5.21E-21	1.30E-20
256	Quinoline	1.55E-11		2.69E-06	5.42E-16		5.19E-19	1.29E-18
257	Tetrachlorobenzene	3.76E-13		5.89E-04	2.87E-15		2.75E-18	6.86E-18
258	Trichlorobenzene	3.17E-13		2.40E-04	9.86E-16		9.44E-19	2.35E-18
259	Unsym. dimethyl hydrazine	2.54E-03		9.55E-11	3.15E-14		3.01E-17	7.51E-17
260	Vapona	3.13E-13		6.31E-07	2.56E-18		2.45E-21	6.11E-21
261								

202	B	C	BG	BH	BI	BJ	BK	BL	BM
203	BASE CASE		TABLE 23						
262	INORGANICS								
263	Arsenic		2.13E-11		2.00E-03	5.54E-13		5.30E-16	1.32E-15
264	Cadmium		5.35E-13		5.50E-04	3.81E-15		3.65E-18	9.11E-18
265	Mercury		5.14E-12		2.50E-01	1.67E-11		1.60E-14	3.98E-14
266									
267		ADULT		CHILD					
268		0.8		DAILY INTAKE OF GRAIN % of TOTAL					DI grain
269		0.05		DAILY INTAKE OF HAY % of TOTAL					DI hay
270		0		DAILY INTAKE OF GRASS % of TOTAL					DI grass
271		0.05		DAILY INTAKE OF CORN SILAGE % of TOTAL					DI corn
272		0.02		SOIL INGESTION % of GRASS INTAKE					SI
273		12.97		TOTAL FEED INTAKE Kg/day					TI
274		0.067		0.037 CONSUMPTION RATE OF BEEF PER DAY Kg/day					CRb
275		0.015		0.009 CONSUMPTION RATE OF BEEF FAT PER DAY Kg/day					CRbf
276		1		1 FRACTION OF BEEF CONSUMED FROM RURAL SOURCE.					HG
277		70		15.5 BODY WEIGHT Kg					WT
278									
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feedx*DIx}) + (C \text{ soil*SI*DI GRASS})) / (1 + (SI*DI GRASS))$$

202	B	C	BO	BP	BQ	BR	BS	BT	BU
203	BASE CASE		TABLE 24						
262	INORGANICS								
263	Arsenic		1.07E-10		2.00E-03	2.77E-12		2.65E-15	6.61E-15
264	Cadmium		1.04E-12		5.50E-04	7.39E-15		7.08E-18	1.76E-17
265	Mercury		8.41E-12		2.50E-01	2.73E-11		2.61E-14	6.51E-14
266									
267		CHILD							
268		ADULT							
269		0.8							DI grain
270		0.05							DI hay
271		0							DI grass
272		0.05							DI corn
273		0.02							SI
274		12.97							TI
275		0.067							CRb
276		0.015							CRbf
277		1							HG
278		70							WT
279									

$$C \text{ diet} = (\text{SUM}(C \text{ feedx} * DIx) * (C \text{ soil} * SI * DI \text{ GRASS})) / ((1 + (SI * DI \text{ GRASS})))$$

B	C	E	F	G	H	I	J
BASE CASE	TABLE 25 DERMAL EXPOSURE CHILD C soil	AVERAGE CONC IN SOIL -1M mg/Kg	MAXIMUM CALCULATED CONC IN SOIL -1M mg/Kg	AF ABSORPTION FACTOR	EDI AVERAGE ESTIMATED DAILY INTAKE mg/Kg/day	EDI MAXIMUM ESTIMATED DAILY INTAKE mg/Kg/day	
284	18-Jun-91	4.73E-09	4.80E-09	1.00E-01	2.08E-14	2.11E-14	
285	15:15:33	7.35E-15	7.45E-15	1.00E-01	3.23E-20	3.28E-20	
286		2.66E-10	2.70E-10	1.00E-01	1.17E-15	1.19E-15	
287		1.64E-12	1.67E-12	1.00E-01	7.22E-18	7.33E-18	
288		1.21E-10	1.23E-10	1.00E-01	5.33E-16	5.40E-16	
289		5.89E-10	5.98E-10	1.00E-01	2.59E-15	2.63E-15	
290		5.94E-11	6.02E-11	1.00E-01	2.61E-16	2.65E-16	
291		1.29E-09	1.31E-09	1.00E-01	5.69E-15	5.77E-15	
292		5.52E-13	5.60E-13	1.00E-01	2.43E-18	2.46E-18	
293		3.26E-13	3.31E-13	1.00E-01	1.43E-18	1.45E-18	
294		2.66E-12	2.70E-12	1.00E-01	1.17E-17	1.19E-17	
295		1.52E-13	1.55E-13	1.00E-01	6.69E-19	6.79E-19	
296	ORGANICS	3.75E-13	3.81E-13	1.00E-01	1.65E-18	1.67E-18	
297	Acetonitrile	1.89E-14	1.92E-14	1.00E-01	8.30E-20	8.42E-20	
298	Aldrin	1.34E-11	1.36E-11	1.00E-01	5.91E-17	6.00E-17	
299	Aniline	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
300	Atrazine	1.36E-12	1.38E-12	1.00E-01	5.98E-18	6.07E-18	
301	Benzaldehyde	1.35E-14	1.37E-14	1.00E-01	5.93E-20	6.01E-20	
302	Benzo(a,h)anthracene	3.57E-11	3.62E-11	1.00E-01	1.57E-16	1.59E-16	
303	Benzo(a,h)anthracene	4.61E-08	4.67E-08	1.00E-01	2.02E-13	2.05E-13	
304	Benzo(a,h)anthracene	6.27E-15	6.36E-15	1.00E-01	2.75E-20	2.79E-20	
305	Benzo(a,h)anthracene	1.85E-14	1.88E-14	1.00E-01	8.13E-20	8.25E-20	
306	Benzofuran	2.29E-12	2.32E-12	1.00E-01	1.00E-17	1.02E-17	
307	Benzothiazole	2.08E-12	2.11E-12	1.00E-01	9.12E-18	9.25E-18	
308	Carbazole	1.45E-08	1.47E-08	1.00E-01	6.38E-14	6.48E-14	
309	4-Chlorobiphenyl	2.45E-13	2.48E-13	1.00E-01	1.08E-18	1.09E-18	
310	4,4'-Dichlorobiphenyl	1.29E-09	1.31E-09	1.00E-01	5.69E-15	5.77E-15	
311	Chloroethane	1.48E-11	1.50E-11	1.00E-01	6.49E-17	6.59E-17	
312	Chloroethane	5.89E-11	5.98E-11	1.00E-01	2.59E-16	2.63E-16	
313	Chloroethane	5.89E-11	5.98E-11	1.00E-01	2.59E-16	2.63E-16	
314	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
315	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
316	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
317	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
318	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
319	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
320	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
321	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
322	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
323	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
324	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
325	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
326	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
327	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
328	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
329	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
330	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
331	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
332	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
333	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
334	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
335	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
336	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
337	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
338	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
339	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
340	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
341	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
342	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	
343	Chloroethane	1.18E-11	1.20E-11	1.00E-01	5.20E-17	5.27E-17	

284	B	C	E	F	G	H	I	J
285	BASE CASE		TABLE 25					
344	INORGANICS							
345	Arsenic		1.56E-09	1.58E-09	1.00E-02	6.86E-16	6.96E-16	
346	Cadmium		9.05E-12	9.18E-12	1.00E-02	3.98E-18	4.03E-18	
347	Mercury		5.85E-11	5.94E-11	1.00E-02	2.57E-17	2.61E-17	
348								
349			195 Number of exposure events per year (events/yr.)					NE
350			2500 Exposed surface area (cm2/event)					ESA
351			0.51 Skin adherence factor for soil (mg/cm2)					SAF
352			1 Soil matrix factor					SMF
353			15.5 Body weight (Kg)					BW
354			365 Days/yr					DAYR
355			1000000 mg/Kg					mgKg
356								
357								

$$EDI = C_{soil} \cdot AF \cdot SAF \cdot ESA \cdot NE \cdot SMF / BW / mgKg / DAYR$$

284	B	C	K	L	M	N	O
285	BASE CASE						
344	INORGANICS						
345	Arsenic		7.80E-10	7.92E-10	1.00E-02	4.02E-16	4.08E-16
346	Cadmium		4.52E-12	4.59E-12	1.00E-02	2.33E-18	2.36E-18
347	Mercury		2.93E-11	2.97E-11	1.00E-02	1.51E-17	1.53E-17
348							
349							
350							
351							
352							
353							
354							
355							
356							
357							

TABLE 26

195 Number of exposure events per year (events/yr)

4500 Exposed surface area (cm2/event)

1.5 Skin adherence factor for soil (mg/cm2)

1 Soil matrix factor

70 Body weight (Kg)

365 Days/yr

1000000 mg/Kg

$$EDI = C_{soil} * AF * SAF * ESA * NE * SMF / BW / mgKg / DAYR$$

NE
ESA
SAF
SMF
BW
DAYR
mgKg

359	B	C	D	E	F	G
360	BASE CASE		TABLE 27			
361			FISH INGESTION			
362						
363			C water	BCF	EDI	EDI
364		18-Jun-91	SURFACE		ADULT	CHILD
365		15:15:33	WATER	BIO. CONC.	ESTIMATED	ESTIMATED
366			CONCENTRAT.	FACTOR	DAILY	DAILY
367			mg/L		INTAKE	INTAKE
368					mg/kg/day	mg/kg/day
369						
370	ORGANICS					
371	Acetonitrile		1.87E-14	0.06	7.76E-21	1.75E-20
372	Aldrin		1.45E-23	28	2.81E-27	6.34E-27
373	Aniline		5.60E-15	6.03	2.33E-19	5.27E-19
374	Atrazine		3.15E-20	0	0.00E+00	0.00E+00
375	Benzaldehyde		4.54E-16	8	2.51E-20	5.67E-20
376	Benzo(a)pyrene		1.27E-15	63	5.53E-19	1.25E-18
377	Benzoic Acid		2.05E-16	15.5	2.20E-20	4.96E-20
378	Benzonitrile		4.80E-15	9	2.99E-19	6.74E-19
379	Benzothiazole		1.83E-20	19.843	2.51E-24	5.67E-24
380	Bis(2-ethylhexyl)phthalate		5.53E-22	850	3.25E-24	7.34E-24
381	Carbazole		2.57E-18	186	3.31E-21	7.46E-21
382	4-Chloroaniline		9.43E-18	14.5	9.45E-22	2.13E-21
383	4-Chlorobiphenyl		8.32E-20	590	3.39E-22	7.66E-22
384	4,4'-Chlorobiphenyl		3.84E-21	215	5.71E-24	1.29E-23
385	Chloroethane		5.03E-19	5.5	1.91E-23	4.32E-23
386	Dibenzofuran		3.97E-18	796.5	2.19E-20	4.94E-20
387	1,2-Dichloroethane		4.14E-18	2	5.73E-23	1.29E-22
388	Dieldrin		2.69E-23	5800	1.08E-24	2.44E-24
389	Hexachlorobenzene		7.16E-18	8690	4.30E-19	9.71E-19
390	Hydrazine		1.82E-15	2.8	3.52E-20	7.96E-20
391	Lindane		5.26E-23	130	4.73E-26	1.07E-25
392	Malathion		3.10E-22	0	0.00E+00	0.00E+00
393	Methyl ethyl ketone		9.04E-20	0	0.00E+00	0.00E+00
394	4-Methylphenol		2.18E-19	18	2.71E-23	6.13E-23
395	Monomethyl hydrazine		5.76E-16	2.8	1.12E-20	2.52E-20
396	Naphthalene		4.99E-17	430	1.48E-19	3.35E-19
397	Naphthalene carbonitrile		1.15E-15	430	3.42E-18	7.72E-18
398	n-Nitrosodimethylamine		5.08E-19	0	0.00E+00	0.00E+00
399	PAHs					
400	Acenaphthalene		2.08E-17	730	1.05E-19	2.37E-19
401	Acenaphthene		2.43E-17	242	4.07E-20	9.18E-20
402	Benzo(a)pyrene		2.18E-17	930	1.40E-19	3.17E-19
403	Chrysene		2.23E-18	23000	3.55E-19	8.01E-19
404	Dibenzo(a,h)anthracene		2.21E-17	520000	7.95E-17	1.79E-16
405	Fluorene		3.25E-18	1300	2.92E-20	6.60E-20
406	Phenanthrene		5.53E-18	2630	1.01E-19	2.27E-19
407	Pyrene		4.55E-17	5100	1.60E-18	3.62E-18
408	Parathion		1.37E-22	335	3.17E-25	7.17E-25
409	Quinoline		4.37E-17	21	6.35E-21	1.43E-20
410	Trichlorobenzene		1.40E-18	991	9.59E-21	2.17E-20
411	Unsym. dimethyl hydrazine		2.27E-15	2.8	4.39E-20	9.92E-20
412	Vapona		4.37E-21	7.0	2.12E-25	4.78E-25
413						
414	INORGANICS					
415	Arsenic		1.80E-13	350	4.36E-15	9.84E-15
416	Copper		6.47E-15	1183	5.29E-16	1.20E-15
417	Zinc		5.07E-14	578	2.03E-15	4.58E-15
418						

359 B	C	D	E	F	G
360 BASE CASE		TABLE 27			
419					
420					
421		CHILD	ADULT		
422		2.42	4.84	FISH INGESTION RATE g/day	
423		15.5	70	ADULT BODY WEIGHT KG	
424		1000	1000	g/KG	
425		0.1	0.1	Fraction lipid in fillet	

A	B	C	D	E	F	G
98			TABLE 28			
99			CARCINOGENIC SLOPE FACTORS ((mg/kg-day)-1)			
100			Inhalation	Oral	Dermal	
101			Slope	Slope	Slope	
102			Factor	Factor	Factor	
103	FARM					
104	BASE CASE					
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		2.40E-01	5.40E-01	NC	
110	Aldrin		1.70E+01	1.70E+01	3.40E+01	
111	Aniline		5.70E-03	5.70E-03	1.14E-02	
112	Benzene		2.90E-02	2.90E-02	NC	
113	Bis(2-ethylhexyl)phthalate		1.40E-02	1.40E-02	2.80E-02	
114	Carbazole		2.00E-02	2.00E-02	4.00E-02	
115	Carbon Tetrachloride		1.30E-01	1.30E-01	NC	
116	Chloroform		8.10E-02	6.10E-03	NC	
117	1,4-Dichlorobenzene		2.40E-02	2.40E-02	NC	
118	1,1-Dichloroethane		9.10E-02	9.10E-02	1.82E-01	
119	1,2-Dichloroethane		1.20E+00	6.00E-01	NC	
120	1,1-Dichloroethene		6.80E-02	6.80E-02	NC	
121	1,2-Dichloropropane		1.60E+01	1.60E+01	3.20E+01	
122	Dieldrin		1.60E+00	1.60E+00	3.20E+00	
123	Hexachlorobenzene		1.71E+01	3.00E+00	6.00E+00	
124	Hydrazine		1.30E+00	1.30E+00	2.60E+00	
125	Lindane		6.30E-03	1.30E-02	NC	
126	Methyl chloride		1.40E-02	7.50E-03	NC	
127	Methylene chloride		1.10E+00	1.10E+00	2.20E+00	
128	4-Methylphenol		5.10E+01	5.10E+01	1.02E+02	
129	Monomethyl hydrazine		6.10E+00	1.15E+01	2.30E+01	
130	n-Nitrosodimethylamine		6.10E+00	1.15E+01	2.30E+01	
131	PAHs		6.10E+00	1.15E+01	2.30E+01	
132	Benzo(a)pyrene		1.20E+01	1.20E+01	2.40E+01	
133	Chrysene		3.30E-03	5.10E-02	NC	
134	Dibenz(a,h)anthracene		1.10E-02	1.10E-02	NC	
135	Parathion		2.90E-01	2.90E-01	5.80E-01	
136	Quinoline		2.95E-01	2.30E+00	NC	
137	Tetrachloroethene					
138	Trichloroethene					
139	Vapona					
140	Vinyl chloride					
141						
142	INORGANICS					
143	Arsenic		1.50E+01	1.75E+00	3.50E+01	
144	Cadmium		6.10E+00	NC	NC	
145	Chromium (VI)		4.10E+01	NC	NC	
146						
147	Total					
148						
149						
150						
151						
152						
153						

AED Adult Exposure Duration	64
CED Child Exposure Duration	5
CID Child Inhalation Duration	1
IED Infant Exposure Duration	1
IID Infant Inhalation Duration	1

A	B	C	I	J	K	L	M	N	O
98			TABLE 29						
99			ADULT CARCINOGENIC RISK						
100									
101									
102	FARM		VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
103	BASE CASE		INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	ADULT
104			CARC.	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.
105			RISK	RISK	RISK	RISK	RISK	RISK	RISK
106									
107									
108	ORGANICS								
109	Acrylonitrile		NA	NA	NA	NA	NA	NA	NA
110	Aldrin		5.30E-16	1.49E-17	2.24E-18	1.63E-19	4.36E-26	5.88E-19	5.48E-16
111	Aniline		1.00E-15	4.61E-20	1.81E-20	1.98E-18	1.22E-21	7.14E-18	1.01E-15
112	Benzene		NA	NA	NA	NA	NA	NA	NA
113	Bis(2-ethylhexyl)phthalate		1.47E-17	1.03E-17	1.23E-18	5.96E-21	4.16E-26	2.15E-20	2.62E-17
114	Carbazole		1.41E-17	1.67E-20	6.44E-21	6.95E-20	6.04E-23	2.51E-19	1.45E-17
115	Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA
116	Chloroform		NA	NA	NA	NA	NA	NA	NA
117	1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		3.13E-16	6.61E-21	2.59E-21	1.62E-19	4.76E-24	5.83E-19	3.14E-16
120	1,1-Dichloroethene		NA	NA	NA	NA	NA	NA	NA
121	1,2-Dichloropropane		NA	NA	NA	NA	NA	NA	NA
122	Dieldrin		6.16E-15	2.50E-18	5.89E-19	2.82E-19	1.58E-23	1.02E-18	6.17E-15
123	Hexachlorobenzene		1.53E-14	2.13E-16	6.42E-17	7.45E-17	6.29E-19	2.69E-16	1.59E-14
124	Hydrazine		3.92E-08	8.95E-17	3.51E-17	1.81E-13	9.66E-20	6.51E-13	3.92E-08
125	Lindane		2.60E-18	2.59E-21	9.96E-22	1.06E-20	5.62E-26	3.84E-20	2.65E-18
126	Methyl chloride		NA	NA	NA	NA	NA	NA	NA
127	Methylene chloride		NA	NA	NA	NA	NA	NA	NA
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		1.69E-09	1.03E-17	4.06E-18	2.09E-14	1.12E-20	7.53E-14	1.70E-09
130	n-Nitrosodimethylamine		1.71E-10	4.97E-18	1.95E-18	9.84E-16	0.00E+00	3.55E-15	1.71E-10
131	PAHS								
132	Benzo(a)pyrene		1.92E-14	2.32E-14	5.01E-15	1.78E-15	1.47E-18	6.41E-15	5.56E-14
133	Chrysene		1.61E-14	8.11E-16	2.22E-16	1.78E-16	3.73E-18	6.41E-16	1.80E-14
134	Dibenzo(a,h)anthracene		3.55E-14	2.69E-14	5.62E-15	1.78E-15	8.35E-16	6.41E-15	7.70E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE
136	Quinoline		1.16E-13	1.46E-17	5.69E-18	2.09E-16	6.96E-20	7.53E-16	1.17E-13
137	Tetrachloroethene		NA	NA	NA	NA	NA	NA	NA
138	Trichloroethene		NA	NA	NA	NA	NA	NA	NA
139	Vapona		1.30E-17	1.66E-21	6.49E-22	4.39E-20	5.61E-26	1.58E-19	1.33E-17
140	Vinyl chloride		NA	NA	NA	NA	NA	NA	NA
141									
142	INORGANICS								
143	Arsenic		3.95E-15	6.47E-14	8.48E-16	3.57E-15	6.97E-15	1.29E-14	9.29E-14
144	Cadmium		NA	NA	NA	NA	NA	NA	NA
145	Chromium (VI)		NA	NA	NA	NA	NA	NA	NA
146									
147	Total		4.11E-08	1.16E-13	1.18E-14	2.10E-13	7.81E-15	7.57E-13	4.11E-08

A - B	C	Q	R	S	T	U	V	W	X
98		TABLE 30							
99		CHILD CARCINOGENIC RISK							
100									
101									
102									
103	FARM	INHALATION	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
104	BASE CASE	CARC. RISK	INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	CHILD
105			CARC. RISK	CARC. RISK	CARC. RISK	CARC. RISK	CARC. RISK	CARC. RISK	CARC. RISK
106									
107									
108	ORGANICS								
109	Acrylonitrile	1.31E-14	NA	NA	NA	NA	NA	NA	1.31E-14
110	Aldrin	3.38E-18	8.90E-17	6.70E-18	4.36E-19	1.15E-19	7.70E-27	7.84E-20	9.98E-17
111	Aniline	4.11E-17	1.67E-16	2.08E-20	3.52E-21	1.40E-18	2.15E-22	9.52E-19	2.11E-16
112	Benzene	1.20E-18	NA	NA	NA	NA	NA	NA	1.20E-18
113	Bis(2-ethylhexyl)phthalate	1.24E-19	2.47E-18	4.64E-18	2.39E-19	4.20E-21	7.34E-27	2.86E-21	7.48E-18
114	Carbazole	1.44E-18	2.37E-18	7.55E-21	1.26E-21	4.90E-20	1.07E-23	3.34E-20	3.90E-18
115	Carbon Tetrachloride	2.72E-17	NA	NA	NA	NA	NA	NA	2.72E-17
116	Chloroform	1.44E-16	NA	NA	NA	NA	NA	NA	1.44E-16
117	1,4-Dichlorobenzene	6.26E-20	NA	NA	NA	NA	NA	NA	6.26E-20
118	1,1-Dichloroethane	NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane	3.36E-18	5.26E-17	2.98E-21	5.04E-22	1.14E-19	8.40E-25	7.78E-20	5.61E-17
120	1,1-Dichloroethene	7.58E-17	NA	NA	NA	NA	NA	NA	7.58E-17
121	1,2-Dichloropropane	1.59E-18	NA	NA	NA	NA	NA	NA	1.59E-18
122	Dieldrin	5.85E-18	1.04E-15	1.13E-18	1.15E-19	1.99E-19	2.78E-24	1.35E-19	1.04E-15
123	Hexachlorobenzene	1.55E-15	2.57E-15	9.60E-17	1.25E-17	5.26E-17	1.11E-19	3.58E-17	4.31E-15
124	Hydrazine	2.13E-11	6.56E-09	4.04E-17	6.84E-18	1.27E-13	1.70E-20	8.68E-14	6.59E-09
125	Lindane	2.21E-19	4.36E-19	1.17E-21	1.94E-22	7.51E-21	9.91E-27	5.11E-21	6.71E-19
126	Methyl chloride	3.09E-19	NA	NA	NA	NA	NA	NA	3.09E-19
127	Methylene chloride	4.14E-17	NA	NA	NA	NA	NA	NA	4.14E-17
128	4-Methylphenol	NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine	4.33E-13	2.82E-10	4.67E-18	7.90E-19	1.47E-14	1.98E-21	1.00E-14	2.83E-10
130	n-Nitrosodimethylamine	2.04E-14	2.87E-11	2.24E-18	3.80E-19	6.95E-16	0.00E+00	4.73E-16	2.87E-11
131	PAHs								
132	Benzo(a)pyrene	1.95E-14	3.20E-15	1.05E-14	9.77E-16	1.25E-15	2.60E-19	8.54E-16	3.63E-14
133	Chrysene	1.95E-15	2.71E-15	3.66E-16	4.32E-17	1.25E-16	6.58E-19	8.54E-17	5.29E-15
134	Dibenzo(a,h)anthracene	1.95E-14	5.94E-15	1.21E-14	1.09E-15	1.25E-15	1.47E-16	8.54E-16	4.10E-14
135	Parathion	NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline	4.33E-15	1.95E-14	6.57E-18	1.11E-18	1.47E-16	1.23E-20	1.00E-16	2.41E-14
137	Tetrachloroethene	2.23E-20	NA	NA	NA	NA	NA	NA	2.23E-20
138	Trichloroethene	7.93E-19	NA	NA	NA	NA	NA	NA	7.93E-19
139	Vapona	9.10E-19	2.18E-18	7.48E-22	1.27E-22	3.09E-20	9.89E-27	2.11E-20	3.14E-18
140	Vinyl chloride	1.22E-17	NA	NA	NA	NA	NA	NA	1.22E-17
141									
142	INORGANICS								
143	Arsenic	6.34E-13	5.64E-16	2.92E-14	1.65E-16	2.52E-15	1.23E-15	1.71E-15	6.70E-13
144	Cadmium	1.50E-15	NA	NA	NA	NA	NA	NA	1.50E-15
145	Chromium (VI)	1.57E-15	NA	NA	NA	NA	NA	NA	1.57E-15
146									
147	Total	2.25E-11	6.88E-09	5.23E-14	2.30E-15	1.48E-13	1.38E-15	1.01E-13	6.90E-09

A	B	C	Z	AA	AB
98			TABLE 31		
99			INFANT CARCINOGENIC RISK		
100					
101					
102					
103	FARM		INHALATION	BREAST MILK	TOTAL
104	BASE CASE		CARC. RISK	INGESTION	INFANT
105				CARC. RISK	CARC. RISK
106					
107					
108	ORGANICS				
109	Acrylonitrile		8.57E-15	5.95E-17	8.63E-15
110	Aldrin		2.21E-18	6.48E-17	6.70E-17
111	Aniline		7.83E-19	1.27E-16	1.54E-16
112	Benzene		8.09E-20	9.06E-22	7.84E-19
113	Bis(2-ethylhexyl)phthalate		9.43E-19	2.32E-17	2.33E-17
114	Carbazole		1.78E-17	3.24E-18	4.19E-18
115	Carbon Tetrachloride		9.42E-17	3.09E-19	1.81E-17
116	Chloroform		4.10E-20	1.23E-19	9.43E-17
117	1,4-Dichlorobenzene		NE	7.11E-22	4.17E-20
118	1,1-Dichloroethane		2.20E-18	2.37E-17	2.59E-17
119	1,2-Dichloroethane		4.96E-17	4.31E-19	5.01E-17
120	1,1-Dichloroethene		1.04E-18	1.81E-20	1.06E-18
121	1,2-Dichloropropane		3.83E-18	3.68E-16	3.72E-16
122	Dieldrin		1.01E-15	8.23E-16	1.83E-15
123	Hexachlorobenzene		1.40E-11	2.27E-09	2.28E-09
124	Hydrazine		1.44E-19	5.22E-19	6.66E-19
125	Lindane		2.02E-19	7.24E-21	2.09E-19
126	Methyl chloride		2.71E-17	2.52E-19	2.73E-17
127	Methylene chloride		NE	NE	NE
128	4-Methylphenol		2.83E-13	9.85E-11	9.88E-11
129	Monomethyl hydrazine		1.34E-14	9.88E-12	9.90E-12
130	n-Nitrosodimethylamine				
131	PAHs				
132	Benzo(a)pyrene		1.28E-14	9.62E-14	1.09E-13
133	Chrysene		1.28E-15	7.93E-15	9.21E-15
134	Dibenzo(a,h)anthracene		1.28E-14	1.04E-13	1.17E-13
135	Parathion		NE	NE	NE
136	Quinoline		2.83E-15	1.40E-14	1.68E-14
137	Tetrachloroethene		1.46E-20	3.92E-21	1.85E-20
138	Trichloroethene		5.19E-19	9.01E-21	5.28E-19
139	Vapona		5.95E-19	2.28E-18	2.88E-18
140	Vinyl chloride		7.97E-18	1.08E-18	9.05E-18
141					
142	INORGANICS				
143	Arsenic		4.15E-13	NA	4.15E-13
144	Cadmium		9.79E-16	NA	9.79E-16
145	Chromium (VI)		1.03E-15	NA	1.03E-15
146					
147	Total		1.47E-11	2.38E-09	2.39E-09

TABLE 32
TOTAL LIFETIME CARCINOGENIC RISK

A 98	B 99	C	AD 100	AE 101	AF 102	AG 103	AH 104	AI 105	AJ 106	AK 107	AL 108
TOTAL LIFETIME CARCINOGENIC RISK											
FARM											
BASE CASE											
ORGANICS											
109	Acrylonitrile	2.17E-14	5.95E-17	NA	6.19E-16	2.16E-17	NA	2.78E-19	NA	NA	2.17E-14
110	Aldrin	5.60E-18	6.48E-17	6.19E-15	1.17E-15	6.69E-20	2.67E-18	2.78E-19	5.13E-26	6.67E-19	7.14E-16
111	Aniline	6.80E-17	1.27E-16	NA	NA	NA	2.16E-20	3.38E-18	1.43E-21	8.09E-18	1.38E-15
112	Benzene	1.98E-18	9.06E-22	NA	NA	NA	NA	NA	NA	NA	1.98E-18
113	Bis(2-ethylhexyl)phthalate	2.04E-19	2.32E-17	1.72E-17	1.72E-17	1.49E-17	1.47E-18	1.02E-20	4.89E-26	2.43E-20	5.70E-17
114	Carbazole	2.38E-18	3.24E-18	1.65E-17	1.65E-17	2.43E-20	7.70E-21	1.19E-19	7.11E-23	2.84E-19	2.26E-17
115	Carbon Tetrachloride	4.50E-17	3.09E-19	NA	NA	NA	NA	NA	NA	NA	2.26E-17
116	Chloroform	2.38E-16	1.23E-19	NA	NA	NA	NA	NA	NA	NA	4.53E-17
117	1,4-Dichlorobenzene	1.04E-19	7.11E-22	NA	NA	NA	NA	NA	NA	NA	2.38E-16
118	1,1-Dichloroethane	NE	NE	NE	NE	NE	NE	NE	NE	NE	1.04E-19
119	1,2-Dichloroethane	5.55E-18	2.37E-17	3.66E-16	3.66E-16	9.59E-21	3.09E-21	2.76E-19	5.60E-24	6.61E-19	3.96E-16
120	1,1-Dichloroethene	1.25E-16	4.31E-19	NA	NA	NA	NA	NA	NA	NA	1.26E-16
121	1,2-Dichloropropane	2.63E-18	1.81E-20	NA	NA	NA	NA	NA	NA	NA	2.65E-18
122	Dieldrin	9.67E-18	3.68E-16	7.20E-15	7.20E-15	3.63E-18	7.04E-19	4.81E-19	1.86E-23	1.15E-18	7.58E-15
123	Hexachlorobenzene	2.56E-15	8.23E-16	1.79E-14	1.79E-14	3.09E-16	7.67E-17	1.27E-16	7.40E-19	3.04E-16	2.20E-14
124	Hydrazine	3.53E-11	2.27E-09	4.58E-08	4.58E-08	1.30E-16	4.19E-17	3.08E-13	1.14E-19	7.38E-13	4.81E-08
125	Lindane	3.65E-19	5.22E-19	3.04E-18	3.04E-18	3.76E-21	1.19E-21	1.82E-20	6.61E-26	4.35E-20	3.99E-18
126	Methyl chloride	5.11E-19	7.24E-21	NA	NA	NA	NA	NA	NA	NA	5.18E-19
127	Methylene chloride	6.85E-17	2.52E-19	NA	NA	NA	NA	NA	NA	NA	6.87E-17
128	4-Methylphenol	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine	7.16E-13	9.85E-11	1.98E-09	1.98E-09	1.50E-17	4.85E-18	3.56E-14	1.32E-20	8.53E-14	2.08E-09
130	n-Nitrosodimethylamine	3.38E-14	9.88E-12	1.99E-10	1.99E-10	7.21E-18	2.33E-18	1.68E-15	0.00E+00	4.02E-15	2.09E-10
131	PAHs										
132	Benzo(a)pyrene	3.23E-14	9.62E-14	2.24E-14	2.24E-14	3.37E-14	5.99E-15	3.03E-15	1.73E-18	7.26E-15	2.01E-13
133	Chrysene	3.23E-15	7.93E-15	1.89E-14	1.89E-14	1.18E-15	2.65E-16	3.03E-16	4.39E-18	7.26E-16	3.25E-14
134	Dibenzo(a,h)anthracene	3.23E-14	1.04E-13	4.14E-14	4.14E-14	3.90E-14	6.71E-15	3.03E-15	9.83E-16	7.26E-15	2.35E-13
135	Parathion	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline	7.17E-15	1.40E-14	1.36E-13	1.36E-13	2.11E-17	6.80E-18	3.56E-16	8.19E-20	8.53E-16	1.58E-13
137	Tetrachloroethene	3.69E-20	3.92E-21	NA	NA	NA	NA	NA	NA	NA	4.08E-20
138	Trichloroethene	1.31E-18	9.01E-21	NA	NA	NA	NA	NA	NA	NA	1.32E-18
139	Vapona	1.51E-18	2.28E-18	1.52E-17	1.52E-17	2.41E-21	7.76E-22	7.48E-20	6.60E-26	1.79E-19	1.93E-17
140	Vinyl chloride	2.01E-17	1.08E-18	NA	NA	NA	NA	NA	NA	NA	2.12E-17
141											
142	INORGANICS										
143	Arsenic	1.05E-12	NA	4.52E-15	4.52E-15	9.39E-14	1.01E-15	6.08E-15	8.20E-15	1.46E-14	1.18E-12
144	Cadmium	2.47E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.47E-15
145	Chromium (VI)	2.59E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.59E-15
146											
147	Total	3.72E-11	2.38E-09	4.79E-08	4.79E-08	1.68E-13	1.41E-14	3.58E-13	9.19E-15	8.58E-13	5.04E-08

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	AN	AO	AP	AQ
98			TABLE 33			
99			TOTAL LIFETIME CARCINOGENIC RISK			
100						
101						
102			INHALATION	INGESTION	DERMAL	TOTAL
103	FARM		CARC.	CARC.	CARC.	LIFETIME
104	BASE CASE		RISK	RISK	RISK	RISK
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		2.17E-14	5.95E-17	NA	2.17E-14
110	Aldrin		5.60E-18	7.08E-16	6.67E-19	7.14E-16
111	Aniline		6.80E-17	1.30E-15	8.09E-18	1.38E-15
112	Benzene		1.98E-18	9.06E-22	NA	1.98E-18
113	Bis(2-ethylhexyl)phthalate		2.04E-19	5.68E-17	2.43E-20	5.70E-17
114	Carbazole		2.38E-18	1.99E-17	2.84E-19	2.26E-17
115	Carbon Tetrachloride		4.50E-17	3.09E-19	NA	4.53E-17
116	Chloroform		2.38E-16	1.23E-19	NA	2.38E-16
117	1,4-Dichlorobenzene		1.04E-19	7.11E-22	NA	1.04E-19
118	1,1-Dichloroethane		NE	NE	NE	NE
119	1,2-Dichloroethane		5.55E-18	3.90E-16	6.61E-19	3.96E-16
120	1,1-Dichloroethene		1.25E-16	4.31E-19	NA	1.26E-16
121	1,2-Dichloropropane		2.63E-18	1.81E-20	NA	2.65E-18
122	Dieldrin		9.67E-18	7.57E-15	1.15E-18	7.58E-15
123	Hexachlorobenzene		2.56E-15	1.92E-14	3.04E-16	2.20E-14
124	Hydrazine		3.53E-11	4.80E-08	7.38E-13	4.81E-08
125	Lindane		3.65E-19	3.58E-18	4.35E-20	3.99E-18
126	Methyl chloride		5.11E-19	7.24E-21	NA	5.18E-19
127	Methylene chloride		6.85E-17	2.52E-19	NA	6.87E-17
128	4-Methylphenol		NE	NE	NE	NE
129	Monomethyl hydrazine		7.16E-13	2.08E-09	8.53E-14	2.08E-09
130	n-Nitrosodimethylamine		3.38E-14	2.09E-10	4.02E-15	2.09E-10
131	PAHs					
132	Benzo(a)pyrene		3.23E-14	1.61E-13	7.26E-15	2.01E-13
133	Chrysene		3.23E-15	2.85E-14	7.26E-16	3.25E-14
134	Dibenzo(a,h)anthracene		3.23E-14	1.95E-13	7.26E-15	2.35E-13
135	Parathion		NE	NE	NE	NE
136	Quinoline		7.17E-15	1.50E-13	8.53E-16	1.58E-13
137	Tetrachloroethene		3.69E-20	3.92E-21	NA	4.08E-20
138	Trichloroethene		1.31E-18	9.01E-21	NA	1.32E-18
139	Vapona		1.51E-18	1.76E-17	1.79E-19	1.93E-17
140	Vinyl chloride		2.01E-17	1.08E-18	NA	2.12E-17
141						
142	INORGANICS					
143	Arsenic		1.05E-12	1.14E-13	1.46E-14	1.18E-12
144	Cadmium		2.47E-15	NA	NA	2.47E-15
145	Chromium (VI)		2.59E-15	NA	NA	2.59E-15
146						
147	Total		3.72E-11	5.03E-08	8.58E-13	5.04E-08

TABLE 34
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D	E	F
		Inhalation RfD	Oral RfD	Dermal RfD
155		1.82E+00	1.00E-01	NC
156		1.00E-02	6.00E-02	3.00E-02
157		4.39E-03	2.70E-04	NC
158		2.55E-04	3.00E-05	1.50E-05
159		7.76E-03	1.95E-03	9.75E-04
160		5.10E-03	5.00E-03	2.50E-03
161	FARM	1.00E-01	1.00E-01	5.00E-02
162	BASE CASE	3.26E-02	1.00E-03	NC
163		5.00E-03	5.00E-03	2.50E-03
164		4.00E+00	4.00E+00	2.00E+00
165	ORGANICS	8.00E-03	8.00E-03	4.00E-03
166	Acetone	1.00E-03	1.00E-03	5.00E-04
167	Acetonitrile	1.33E-03	5.00E-02	NC
168	Acrylonitrile	5.10E-03	4.00E-03	1.00E-02
169	Aldrin	3.16E-02	5.00E-03	2.50E-03
170	Aniline	4.00E-03	7.00E-04	NC
171	Atrazine	5.00E-03	4.00E-03	2.00E-03
172	Benzaldehyde	2.45E-02	2.00E-02	1.22E-02
173	Benzene	2.33E-02	2.33E-02	1.16E-02
174	Benzo(a)pyrene	2.65E+00	NA	NC
175	Benzo(b)fluoranthene	5.00E-02	1.00E-02	NC
176	Benzo(k)fluoranthene	NA	NA	NC
177	Benzonitrile	4.00E-02	9.00E-02	NC
178	Benzothiazole	1.00E-01	1.00E-01	NC
179	Biphenyl	4.08E-02	4.89E-03	2.45E-03
180	Bis(2-ethylhexyl)phthalate	2.04E-02	9.00E-03	NC
181	Carbazole	8.10E-01	2.00E-02	NC
182	Carbon Tetrachloride	3.54E-01	8.60E-03	NC
183	4-Chloroaniline	2.55E-04	5.00E-05	2.50E-05
184	Chlorobenzene	8.10E-03	8.10E-03	NC
185	4-Chlorobiphenyl	1.33E-04	8.00E-04	4.00E-04
186	4,4'-Chlorobiphenyl	5.10E-04	3.00E-04	3.00E-04
187	Chloroethane	1.02E-02	2.00E-02	1.00E-02
188	Chloroform	1.05E-01	1.80E-02	NC
189	Dibenzofuran	8.57E-01	6.00E-02	NC
190	Dibenzopentadiene (total)	9.00E-02	5.00E-01	2.50E-01
191	1,1-Dichloroethane	9.00E-02	5.00E-01	2.50E-02
192	1,2-Dichloroethane	1.02E-02	5.00E-02	1.10E-04
193	1,1-Dichloroethene	1.94E-05	2.20E-04	2.00E-03
194	1,2-Dichloroethene	5.10E-02	4.00E-03	2.00E-03
195	1,2-Dichloropropane	5.10E-02	4.00E-03	2.00E-03
196	Dieldrin	2.80E-04	2.80E-04	1.40E-04
197	Dimethyldisulfide	6.00E-02	6.00E-02	3.00E-02
198	Hexachlorobenzene	6.00E-02	6.00E-02	3.00E-02
199	Hydrazine	3.00E-02	3.00E-02	1.50E-02
200	Lindane	1.05E-01	1.80E-02	NC
201	Malathion	8.57E-01	6.00E-02	NC
202	Methyl chloride	9.00E-02	5.00E-01	2.50E-01
203	Methylene chloride	1.02E-02	5.00E-02	2.50E-02
204	Methyl ethyl ketone	1.94E-05	2.20E-04	1.10E-04
205	4-Methylphenol	5.10E-02	4.00E-03	2.00E-03
206	Monomethyl hydrazine	5.10E-02	4.00E-03	2.00E-03
207	Naphthalene	5.10E-02	4.00E-03	2.00E-03
208	Naphthalene carbonitrile	2.80E-04	2.80E-04	1.40E-04
209	n-Nitrosodimethylamine	6.00E-02	6.00E-02	3.00E-02
210	PAHs	6.00E-02	6.00E-02	3.00E-02
211	Acenaphthalene	3.00E-02	3.00E-02	1.50E-02
212	Acenaphthene	3.00E-02	3.00E-02	1.50E-02
213	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
214	Chrysene	3.00E-02	3.00E-02	1.50E-02

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 34		
156		3.00E-02	3.00E-02	1.50E-02
215	Dibenzo(a,h)anthracene	4.00E-02	4.00E-02	2.00E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
218	Pyrene	3.00E-02	3.00E-02	1.50E-02
219	Parathion	5.10E-05	6.00E-03	3.00E-03
220	Pentachlorobenzene	8.00E-04	8.00E-04	4.00E-04
221	Phenol	1.94E-02	6.00E-01	3.00E-01
222	Pyridine	1.63E-02	1.00E-03	NC
223	Quinoline	2.00E-01	2.00E-01	1.00E-01
224	Tetrachlorobenzene	3.00E-04	3.00E-04	1.50E-04
225	Tetrachloroethene	3.46E-01	1.00E-02	NC
226	Toluene	5.71E-01	2.00E-01	NC
227	Trichlorobenzene	3.00E-03	2.00E-02	1.00E-02
228	Trichloroethene	2.74E-01	7.35E-03	NC
229	Unsym. dimethyl hydrazine	1.22E-03	1.22E-03	6.10E-04
230	Vapona	8.00E-04	8.00E-04	4.00E-04
231	Vinyl acetate	2.00E-01	1.00E+00	NC
232	Vinyl chloride	1.33E-02	1.30E-03	NC
233	Xylenes (total)	8.57E-02	2.00E+00	NC
234				
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

B	C	H	I	J	K	L	M	N	O	
TABLE 35 ADULT HAZARD INDEX										
		INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX	
155	FARM BASE CASE	2.41E-15	NA	NA	NA	NA	NA	NA	2.41E-15	
156		3.97E-10	1.04E-09	8.07E-16	3.15E-16	1.14E-13	1.29E-19	4.12E-13	1.44E-09	
157		3.85E-10	NA	NA	NA	NA	NA	NA	3.85E-10	
158		2.42E-14	1.16E-12	9.67E-13	1.10E-13	3.55E-16	9.36E-23	1.28E-15	2.26E-12	
159		2.88E-11	1.05E-10	4.77E-15	1.82E-15	1.98E-13	1.20E-16	7.13E-13	1.34E-10	
160		2.71E-13	1.55E-13	8.66E-17	2.71E-17	4.76E-16	0.00E+00	1.72E-15	4.28E-13	
161		1.02E-12	5.26E-13	7.73E-17	2.87E-17	1.76E-15	2.51E-19	6.33E-15	1.55E-12	
162		3.92E-14	NA	NA	NA	NA	NA	NA	3.92E-14	
163		9.90E-11	5.58E-11	3.06E-14	9.60E-15	1.71E-13	1.11E-16	6.16E-13	1.56E-10	
164		1.25E-14	4.85E-15	1.45E-18	5.21E-19	2.15E-17	5.49E-21	7.75E-17	1.74E-14	
165	ORGANICS	1.36E-10	6.58E-11	1.13E-14	4.16E-15	2.35E-13	3.73E-17	8.46E-13	2.03E-10	
166		4.64E-13	1.67E-13	6.33E-17	2.23E-17	8.00E-16	2.51E-21	2.88E-15	6.34E-13	
167		3.75E-10	NA	NA	NA	NA	NA	NA	3.75E-10	
168		5.37E-14	2.94E-13	6.85E-12	7.69E-13	1.18E-16	8.13E-22	8.51E-17	7.96E-12	
169		4.47E-13	1.75E-13	3.43E-16	8.92E-17	7.71E-16	6.61E-19	2.78E-15	6.25E-13	
170		2.05E-13	NA	NA	NA	NA	NA	NA	2.05E-13	
171		3.20E-14	1.02E-14	3.56E-18	1.28E-18	5.52E-17	2.36E-19	1.99E-16	4.25E-14	
172		6.15E-14	NA	NA	NA	NA	NA	NA	6.15E-14	
173		1.29E-14	2.70E-15	2.15E-16	3.10E-17	2.22E-17	1.39E-20	8.04E-17	1.59E-14	
174		4,4'-Chlorobiphenyl	6.81E-16	1.16E-16	5.07E-17	6.39E-18	1.17E-18	2.45E-22	4.25E-18	8.59E-16
175	Dichlorobenzenes (total)	Chloroethane	NE	NE	NE	NE	NE	NE	4.26E-15	
176		Chloroform	1.10E-12	NA	NA	NA	NA	NA	1.10E-12	
177		Dibenzofuran	NE	NE	NE	NE	NE	NE	NE	
178		1,1-Dichloroethane	3.20E-14	NA	NA	NA	NA	NA	3.20E-14	
179		1,2-Dichloroethane	3.66E-14	NA	NA	NA	NA	NA	3.66E-14	
180		1,1-Dichloroethene	2.80E-14	7.90E-13	1.78E-17	6.60E-18	4.03E-16	1.17E-20	8.20E-13	
181		1,2-Dichloroethene	9.60E-14	NA	NA	NA	NA	NA	9.60E-14	
182		1,2-Dichloroethene	2.09E-15	NA	NA	NA	NA	NA	2.09E-15	
183		1,2-Dichloropropane	2.05E-15	NA	NA	NA	NA	NA	2.05E-15	
184		Dieldrin	4.44E-14	8.55E-12	6.84E-14	8.09E-15	3.91E-16	2.16E-20	1.41E-15	8.68E-12
185	Hexachlorobenzene	Dimethyldisulfide	3.84E-13	NA	NA	NA	NA	NA	3.84E-13	
186		3.74E-11	1.47E-11	2.18E-12	2.79E-13	6.46E-14	5.38E-16	2.33E-13	5.49E-11	
187		2.91E-07	2.42E-05	5.52E-14	2.16E-14	1.11E-10	5.87E-17	4.01E-10	2.45E-05	
188		1.03E-14	8.09E-15	1.37E-17	3.54E-18	3.03E-17	1.58E-22	1.09E-16	1.86E-14	
189		1.52E-15	1.45E-16	3.26E-19	9.64E-20	1.34E-18	0.00E+00	4.84E-18	1.68E-15	
190		Methyl chloride	1.45E-14	NA	NA	NA	NA	NA	NA	1.45E-14
191		Methylene chloride	1.07E-13	NA	NA	NA	NA	NA	NA	1.07E-13
192		Methyl ethyl ketone	2.13E-14	3.02E-14	8.43E-20	3.27E-20	6.63E-18	0.00E+00	2.39E-17	5.16E-14
193		4-Methylphenol	1.71E-13	4.97E-14	4.39E-18	1.56E-18	6.02E-17	5.43E-22	2.17E-16	2.21E-13
194		Monomethyl hydrazine	6.29E-07	7.77E-06	4.74E-14	1.86E-14	9.57E-11	5.07E-17	3.45E-10	8.40E-06
195	Naphthalene carbonitrile n-Nitrosodimethylamine PAHs	Naphthalene	4.03E-15	2.88E-14	4.55E-17	1.11E-17	8.87E-17	3.71E-17	3.20E-16	3.33E-14
196		Naphthalene carbonitrile	2.13E-11	1.52E-10	2.30E-13	5.85E-14	4.69E-13	8.55E-16	1.69E-12	1.76E-10
197		n-Nitrosodimethylamine	4.43E-11	1.33E-08	3.88E-16	1.52E-16	7.65E-14	0.00E+00	2.76E-13	1.33E-08
198		Acenaphthalene	8.25E-13	5.33E-13	2.52E-15	4.81E-16	1.42E-15	1.75E-18	5.13E-15	1.37E-12
199		Acenaphthene	8.25E-13	2.47E-13	1.89E-15	3.84E-16	1.42E-15	6.78E-19	5.13E-15	1.08E-12
200		Benzo(a)pyrene	3.31E-12	1.93E-13	1.65E-12	1.93E-13	5.71E-15	4.67E-18	2.06E-14	5.37E-12
201		Chrysene	3.31E-13	6.51E-14	3.95E-14	4.85E-15	5.71E-16	1.18E-17	2.06E-15	4.43E-13
202										
203										
204										
205										
206										
207										
208										
209										
210										
211										
212										
213										
214										

B	C	H	I	J	K	L	M	N	O
155		TABLE 35							
156		3.31E-12	2.45E-13	1.98E-12	2.30E-13	5.71E-15	2.65E-15	2.06E-14	5.80E-12
215	Dibenzo(a,h)anthracene	2.48E-12	8.43E-13	8.33E-14	1.12E-14	4.29E-15	NA	1.55E-14	3.44E-12
216	Fluoranthene	2.48E-13	9.86E-14	1.40E-15	2.38E-16	4.29E-16	7.30E-19	1.55E-15	3.51E-13
217	Fluorene	1.29E-15	3.87E-16	1.07E-17	1.71E-18	2.23E-18	3.35E-18	8.03E-18	1.70E-15
218	Phenanthrene	6.62E-12	2.12E-12	2.03E-13	2.75E-14	1.14E-14	5.35E-17	4.12E-14	9.02E-12
219	Pyrene	4.83E-13	1.27E-15	7.68E-18	1.63E-18	7.08E-18	5.29E-23	2.55E-17	4.84E-13
220	Parathion	1.52E-11	1.10E-11	3.76E-13	5.19E-14	2.63E-14	NA	9.49E-14	2.68E-11
221	Pentachlorobenzene	1.01E-14	1.09E-15	2.42E-20	9.00E-21	5.61E-19	NA	2.02E-18	1.12E-14
222	Phenol	6.67E-11	NA	NA	NA	NA	NA	NA	6.67E-11
223	Pyridine	5.59E-14	5.59E-14	7.82E-18	2.75E-18	9.65E-17	3.17E-20	3.48E-16	1.12E-13
224	Quinoline	2.00E-11	3.25E-11	1.10E-13	1.88E-14	3.45E-14	NA	1.24E-13	5.27E-11
225	Tetrachlorobenzene	6.05E-16	NA	NA	NA	NA	NA	NA	6.05E-16
226	Tetrachloroethene	5.85E-15	NA	NA	NA	NA	NA	NA	5.85E-15
227	Toluene	1.01E-12	2.83E-14	3.90E-16	7.72E-17	2.62E-16	4.80E-19	9.45E-16	1.04E-12
228	Trichlorobenzene	8.13E-15	NA	NA	NA	NA	NA	NA	8.13E-15
229	Trichloroethene	3.94E-08	7.12E-06	6.39E-14	2.50E-14	6.80E-11	3.60E-17	2.45E-10	7.15E-06
230	Unsym. dimethyl hydrazine	1.22E-13	6.72E-14	8.48E-18	3.17E-18	2.10E-16	2.64E-22	7.56E-16	1.90E-13
231	Vapona	6.90E-15	NA	NA	NA	NA	NA	NA	6.90E-15
232	Vinyl acetate	9.62E-14	NA	NA	NA	NA	NA	NA	9.62E-14
233	Vinyl chloride	2.78E-15	NA	NA	NA	NA	NA	NA	2.78E-15
234	Xylenes (total)								
235									
236	INORGANICS								
237	Arsenic	6.42E-09	5.45E-11	2.16E-10	2.65E-12	2.26E-12	4.36E-12	8.16E-12	6.71E-09
238	Cadmium	1.49E-10	4.33E-13	2.54E-13	7.08E-15	1.31E-14	NA	4.73E-14	1.50E-10
239	Chromium (III)	6.60E-11	NA	NA	NA	NA	NA	NA	6.60E-11
240	Chromium (VI)	2.32E-11	NA	NA	NA	NA	NA	NA	2.32E-11
241	Copper	4.98E-12	NA	NA	NA	NA	1.39E-14	NA	5.00E-12
242	Iron	1.19E-06	NA	NA	NA	NA	NA	NA	1.19E-06
243	Mercury	5.73E-10	1.03E-11	2.36E-12	8.70E-11	2.83E-13	NA	1.02E-12	6.75E-10
244	Selenium	7.30E-10	NA	NA	NA	NA	NA	NA	7.30E-10
245	Silver	6.66E-11	NA	NA	NA	NA	NA	NA	6.66E-11
246	Zinc	4.77E-11	NA	NA	NA	NA	1.01E-14	NA	4.77E-11
247									
248	Total (Hazard Index)	2.15E-06	3.91E-05	2.34E-10	9.15E-11	2.79E-10	4.38E-12	1.01E-09	4.12E-05

155 B	C	Q	R	S	T	U	V	W	X
156		TABLE 36							
157		CHILD HAZARD INDEX							
158									
159									
160									
161 FARM									
162 BASE CASE									
163									
164									
165									
166 ORGANICS									
167	Acetone	5.45E-15	NA	4.66E-15	NA	1.03E-12	NA	NA	5.45E-15
168	Acetonitrile	8.97E-10	2.23E-09	NA	7.85E-16	1.03E-12	2.92E-19	7.03E-13	3.13E-09
169	Acrylonitrile	8.70E-10	NA	NA	NA	NA	NA	NA	8.70E-10
170	Aldrin	5.46E-14	2.49E-12	5.58E-12	2.73E-13	3.21E-15	2.11E-22	2.18E-15	8.41E-12
171	Aniline	6.50E-11	2.22E-10	2.75E-14	4.55E-15	1.79E-12	2.70E-16	1.22E-12	2.90E-10
172	Atrazine	6.11E-13	3.29E-13	5.00E-16	6.75E-17	4.30E-15	0.00E+00	2.93E-15	9.48E-13
173	Benzaldehyde	2.30E-12	1.11E-12	4.47E-16	7.16E-17	1.59E-14	5.67E-19	1.08E-14	3.44E-12
174	Benzene	8.86E-14	NA	NA	NA	NA	NA	NA	8.86E-14
175	Benzofuran	2.24E-10	1.19E-10	1.77E-13	2.39E-14	1.54E-12	2.50E-16	1.05E-12	3.45E-10
176	Benzoic Acid	2.81E-14	1.02E-14	8.37E-18	1.30E-18	1.94E-16	1.24E-20	1.32E-16	3.87E-14
177	Benzonitrile	3.07E-10	1.39E-10	6.50E-14	1.04E-14	2.12E-12	8.43E-17	1.44E-12	4.50E-10
178	Benzothiazole	1.05E-12	3.52E-13	3.65E-16	5.57E-17	7.23E-15	5.67E-21	4.92E-15	1.41E-12
179	Biphenyl	8.46E-10	NA	NA	NA	NA	NA	NA	8.46E-10
180	Bis(2-ethylhexyl)phthalate	1.21E-13	6.31E-13	3.95E-11	1.92E-12	1.07E-15	1.83E-21	1.45E-16	4.22E-11
181	Carbazole	1.01E-12	3.70E-13	1.98E-15	2.22E-16	6.97E-15	1.49E-18	4.74E-15	1.39E-12
182	Carbon Tetrachloride	4.03E-13	NA	NA	NA	NA	NA	NA	4.03E-13
183	4-Chloroaniline	7.22E-14	2.15E-14	2.05E-17	3.20E-18	4.98E-16	5.34E-19	3.40E-16	9.46E-14
184	Chlorobenzene	1.39E-13	NA	NA	NA	NA	NA	NA	1.39E-13
185	4-Chlorobiphenyl	2.90E-14	5.64E-15	1.24E-15	7.73E-17	2.00E-16	3.13E-20	1.37E-16	3.63E-14
186	4,4'-Chlorobiphenyl	1.54E-15	2.40E-16	2.93E-16	1.59E-17	1.06E-17	5.53E-22	7.26E-18	2.10E-15
187	Chloroethane	9.62E-15	NE	NE	NE	NE	NE	NE	9.62E-15
188	Chloroform	2.49E-12	NA	NA	NA	NA	NA	NA	2.49E-12
189	Dibenzofuran	NE	NE	NE	NE	NE	NE	NE	NE
190	Dichlorobenzenes (total)	7.22E-14	NA	NA	NA	NA	NA	NA	7.22E-14
191	1,1-Dichloroethane	8.26E-14	NA	NA	NA	NA	NA	NA	8.26E-14
192	1,2-Dichloroethane	6.33E-14	1.70E-12	1.03E-16	1.65E-17	3.64E-15	2.64E-20	2.48E-15	1.77E-12
193	1,1-Dichloroethene	2.17E-13	NA	NA	NA	NA	NA	NA	2.17E-13
194	1,2-Dichloroethene	4.72E-15	NA	NA	NA	NA	NA	NA	4.72E-15
195	1,2-Dichloropropane	4.62E-15	NA	NA	NA	NA	NA	NA	4.62E-15
196	Dieldrin	1.00E-13	1.84E-11	3.95E-13	2.02E-14	3.53E-15	4.87E-20	2.41E-15	1.89E-11
197	Dimethyldisulfide	8.68E-13	NA	NA	NA	NA	NA	NA	8.68E-13
198	Hexachlorobenzene	8.45E-11	3.12E-11	1.26E-11	6.97E-13	5.83E-13	1.21E-15	3.97E-13	1.30E-10
199	Hydrazine	6.57E-07	5.18E-05	3.18E-13	5.39E-14	1.01E-09	1.33E-16	6.85E-10	5.25E-05
200	Lindane	2.33E-14	1.72E-14	7.91E-17	8.84E-18	2.73E-16	3.56E-22	1.86E-16	4.10E-14
201	Malathion	3.44E-15	3.01E-16	1.88E-18	2.41E-19	1.21E-17	0.00E+00	8.25E-18	3.76E-15
202	Methyl chloride	3.27E-14	NA	NA	NA	NA	NA	NA	3.27E-14
203	Methylene chloride	2.42E-13	NA	NA	NA	NA	NA	NA	2.42E-13
204	Methyl ethyl ketone	4.82E-14	6.49E-14	4.87E-19	8.16E-20	5.99E-17	0.00E+00	4.08E-17	1.13E-13
205	4-Methylphenol	3.86E-13	1.06E-13	2.54E-17	3.90E-18	1.23E-16	1.23E-21	3.70E-16	4.93E-13
206	Monomethyl hydrazine	1.42E-06	1.66E-05	2.74E-13	4.64E-14	8.64E-10	1.14E-16	5.89E-10	1.80E-05
207	Naphthalene	9.11E-15	6.13E-14	2.51E-16	2.76E-17	8.01E-16	8.38E-17	5.46E-16	7.21E-14
208	Naphthalene carbonitrile	4.82E-11	3.24E-10	1.33E-12	1.46E-13	4.24E-12	1.93E-15	2.89E-12	3.81E-10
209	n-Nitrosodimethylamine	1.00E-10	2.85E-08	2.24E-15	3.78E-16	6.91E-13	0.00E+00	4.71E-13	2.86E-08
210	PAHs								
211	Acenaphthalene	1.86E-12	1.14E-12	1.45E-14	1.20E-15	1.29E-14	3.95E-18	8.76E-15	3.04E-12
212	Acenaphthene	1.86E-12	5.20E-13	1.09E-14	9.58E-16	1.29E-14	1.53E-17	8.76E-15	2.42E-12
213	Benzo(a)pyrene	7.48E-12	3.75E-13	9.53E-12	4.80E-13	5.16E-14	1.06E-17	3.52E-14	1.79E-11
214	Chrysene	7.48E-13	1.36E-13	2.28E-13	1.21E-14	5.16E-15	2.67E-17	3.52E-15	1.13E-12

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	Q	R	S	T	U	V	W	X
155		TABLE 36							
156		7.48E-12	4.88E-13	1.14E-11	5.74E-13	5.16E-14	5.98E-15	3.52E-14	2.01E-11
215	Dibenzo(a,h)anthracene	5.61E-13	1.78E-12	4.81E-13	2.78E-14	3.87E-14	NA	2.64E-14	7.97E-12
216	Fluoranthene	5.61E-13	2.09E-13	8.07E-15	5.92E-16	3.87E-15	1.65E-18	2.64E-15	7.85E-13
217	Fluorene	2.91E-15	8.17E-16	6.19E-17	4.26E-18	2.01E-17	7.57E-18	1.37E-17	3.84E-15
218	Phenanthrene	1.50E-11	4.47E-12	1.17E-12	6.85E-14	1.03E-13	1.21E-16	7.03E-14	2.08E-11
219	Pyrene	1.09E-12	2.68E-15	4.43E-17	4.06E-18	6.39E-17	1.19E-22	4.35E-17	1.09E-12
220	Parathion	3.44E-11	2.35E-11	2.17E-12	1.30E-13	2.38E-13	NA	1.62E-13	6.06E-11
221	Pentachlorobenzene	2.27E-14	2.34E-15	1.40E-19	2.24E-20	5.07E-18	NA	3.45E-18	2.51E-14
222	Phenol	1.51E-10	NA	NA	NA	NA	NA	NA	1.51E-10
223	Pyridine	1.26E-13	1.19E-13	4.51E-17	6.86E-18	8.72E-16	7.16E-20	5.94E-16	2.47E-13
224	Quinoline	4.51E-11	6.96E-11	6.37E-13	4.69E-14	3.11E-13	NA	2.12E-13	1.16E-10
225	Tetrachlorobenzene	1.37E-15	NA	NA	NA	NA	NA	NA	1.37E-15
226	Tetrachloroethene	1.32E-14	NA	NA	NA	NA	NA	NA	1.32E-14
227	Toluene	2.29E-12	5.91E-14	2.25E-15	1.93E-16	2.37E-15	1.08E-18	1.61E-15	2.35E-12
228	Trichlorobenzene	1.84E-14	NA	NA	NA	NA	NA	NA	1.84E-14
229	Trichloroethene	8.90E-08	1.53E-05	3.69E-13	6.24E-14	6.15E-10	8.13E-17	4.19E-10	1.53E-05
230	Unsym. dimethyl hydrazine	2.74E-13	1.42E-13	4.90E-17	7.90E-18	1.89E-15	5.97E-22	1.29E-15	4.20E-13
231	Vapona	1.56E-14	NA	NA	NA	NA	NA	NA	1.56E-14
232	Vinyl acetate	2.17E-13	NA	NA	NA	NA	NA	NA	2.17E-13
233	Vinyl chloride	6.28E-15	NA	NA	NA	NA	NA	NA	6.28E-15
234	Xylenes (total)								
235									
236	INORGANICS								
237	Arsenic	1.45E-08	1.01E-10	1.25E-09	6.61E-12	2.04E-11	9.84E-12	1.39E-11	1.59E-08
238	Cadmium	3.36E-10	8.14E-13	1.47E-12	1.76E-14	1.18E-13	NA	8.07E-14	3.39E-10
239	Chromium (III)	1.49E-10	NA	NA	NA	NA	NA	NA	1.49E-10
240	Chromium (VI)	5.25E-11	NA	NA	NA	NA	NA	NA	5.25E-11
241	Copper	1.13E-11	NA	NA	NA	NA	3.14E-14	NA	1.13E-11
242	Iron	2.68E-06	NA	NA	NA	NA	NA	NA	2.68E-06
243	Mercury	1.29E-09	1.93E-11	1.36E-11	2.17E-10	2.55E-12	NA	1.74E-12	1.55E-09
244	Selenium	1.65E-09	NA	NA	NA	NA	NA	NA	1.65E-09
245	Silver	1.50E-10	NA	NA	NA	NA	NA	NA	1.50E-10
246	Zinc	1.08E-10	NA	NA	NA	NA	2.29E-14	NA	1.08E-10
247									
248	Total (Hazard Index)	4.87E-06	8.37E-05	1.35E-09	2.28E-10	2.52E-09	9.90E-12	1.72E-09	8.85E-05

155 B	C	Z	AA	AB
156		TABLE 37		
157		INFANT HAZARD INDEX		
158				
159				
160				
161 FARM				
162 BASE CASE				
163				
164				
165				
166 ORGANICS				
167	Acetone	3.57E-15	1.13E-15	4.69E-15
168	Acetonitrile	5.87E-10	4.03E-09	4.62E-09
169	Acrylonitrile	5.69E-10	2.86E-11	5.98E-10
170	Aldrin	3.58E-14	8.89E-12	8.93E-12
171	Aniline	4.25E-11	8.00E-10	8.43E-10
172	Atrazine	4.00E-13	1.57E-12	1.97E-12
173	Benzaldehyde	1.50E-12	5.64E-12	7.14E-12
174	Benzene	5.80E-14	2.19E-15	6.02E-14
175	Benzofuran	1.46E-10	5.65E-10	7.12E-10
176	Benzoic Acid	1.84E-14	6.32E-14	8.16E-14
177	Benzonitrile	2.01E-10	7.37E-10	9.38E-10
178	Benzothiazole	6.85E-13	2.30E-12	2.99E-12
179	Biphenyl	5.54E-10	2.56E-13	5.54E-10
180	Bis(2-ethylhexyl)phthalate	7.93E-14	2.90E-11	2.91E-11
181	Carbazole	6.60E-13	2.27E-12	2.93E-12
182	Carbon Tetrachloride	3.03E-13	2.38E-13	5.41E-13
183	4-Chloroaniline	4.73E-14	1.54E-13	2.01E-13
184	Chlorobenzene	9.09E-14	3.94E-16	9.13E-14
185	4-Chlorobiphenyl	1.90E-14	5.77E-14	7.67E-14
186	4,4'-Chlorobiphenyl	1.01E-15	3.12E-15	4.12E-15
187	Chloroethane	6.30E-15	NE	6.30E-15
188	Chloroform	1.63E-12	1.41E-13	1.77E-12
189	Dibenzofuran	NE	NE	NE
190	Dichlorobenzenes (total)	4.73E-14	3.65E-16	4.76E-14
191	1,1-Dichloroethane	5.41E-14	9.39E-16	5.50E-14
192	1,2-Dichloroethane	4.14E-14	3.73E-12	3.77E-12
193	1,1,1-Dichloroethane	1.42E-13	5.58E-15	1.47E-13
194	1,2-Dichloroethane	3.09E-15	2.17E-15	5.26E-15
195	1,2-Dichloropropane	3.03E-15	2.16E-15	5.19E-15
196	Dieldrin	6.57E-14	3.22E-11	3.23E-11
197	Dimethyldisulfide	5.68E-13	9.86E-15	5.78E-13
198	Hexachlorobenzene	5.53E-11	4.50E-11	1.00E-10
199	Hydrazine	4.30E-07	8.82E-05	8.86E-05
200	Lindane	1.53E-14	9.37E-14	1.09E-13
201	Malathion	2.25E-15	3.37E-15	5.62E-15
202	Methyl chloride	2.14E-14	2.17E-15	2.36E-14
203	Methylene chloride	1.58E-13	3.92E-14	1.97E-13
204	Methyl ethyl ketone	3.15E-14	1.24E-13	1.56E-13
205	4-Methylphenol	2.53E-13	3.08E-13	5.61E-13
206	Monomethyl hydrazine	9.29E-07	2.85E-05	2.94E-05
207	Naphthalene	5.96E-15	2.93E-13	2.99E-13
208	Naphthalene carbonitrile	3.15E-11	1.55E-09	1.58E-09
209	n-Nitrosodimethylamine	6.55E-11	4.85E-08	4.85E-08
210	PAHs			
211	Acenaphthalene	1.22E-12	4.97E-12	6.18E-12
212	Acenaphthene	1.22E-12	3.92E-12	5.14E-12
213	Benzo(a)pyrene	4.89E-12	1.95E-11	2.44E-11
214	Chrysene	4.89E-13	1.61E-12	2.10E-12

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155 B	C	TABLE 37			AA	AB
		Z	AA	AB		
156						
215	Dibenzo(a,h)anthracene	4.89E-12	2.11E-11	2.60E-11		
216	Fluoranthene	3.67E-12	1.25E-11	1.62E-11		
217	Fluorene	3.67E-13	1.27E-12	1.64E-12		
218	Phenanthrene	1.91E-15	6.18E-15	8.09E-15		
219	Pyrene	9.79E-12	3.28E-11	4.25E-11		
220	Parathion	7.13E-13	1.97E-14	7.33E-13		
221	Pentachlorobenzene	2.25E-11	2.20E-11	4.45E-11		
222	Phenol	1.49E-14	5.15E-15	2.00E-14		
223	Pyridine	9.86E-11	2.79E-11	1.26E-10		
224	Quinoline	8.27E-14	4.08E-13	4.91E-13		
225	Tetrachlorobenzene	2.95E-11	4.32E-11	7.28E-11		
226	Tetrachloroethene	8.95E-16	5.37E-16	1.43E-15		
227	Toluene	8.64E-15	7.14E-17	8.71E-15		
228	Trichlorobenzene	1.50E-12	1.49E-13	1.64E-12		
229	Trichloroethene	1.21E-14	7.80E-15	1.98E-14		
230	Unsym. dimethyl hydrazine	5.83E-08	2.60E-05	2.61E-05		
231	Vapona	1.80E-13	6.89E-13	8.69E-13		
232	Vinyl acetate	1.02E-14	3.54E-17	1.02E-14		
233	Vinyl chloride	1.42E-13	2.52E-14	1.67E-13		
234	Xylenes (total)	4.11E-15	1.02E-19	4.11E-15		
235						
INORGANICS						
237	Arsenic	9.49E-09	NE	9.49E-09		
238	Cadmium	2.20E-10	NE	2.20E-10		
239	Chromium (III)	9.76E-11	NE	9.76E-11		
240	Chromium (VI)	3.43E-11	NE	3.43E-11		
241	Copper	7.37E-12	NE	7.37E-12		
242	Iron	1.75E-06	NE	1.75E-06		
243	Mercury	8.47E-10	NE	8.47E-10		
244	Selenium	1.08E-09	NE	1.08E-09		
245	Silver	9.85E-11	NE	9.85E-11		
246	Zinc	7.04E-11	NE	7.04E-11		
247						
248	Total (Hazard Index)	3.18E-06	1.43E-04	1.46E-04		

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	D
253	TABLE 38		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256			
257	FARM		
258	BASE CASE		
259			
260	Adult		NA
261	Inhalation		
262			
263	Ingestion		81.5528
264	Vegetables		81.5522
265	Milk		0.0002
266	Beef		0.0000
267	Soil\Dust		0.0004
268	Fish		0.0000
269			
270	Dermal		0.0015
271			
272	Child		
273	Inhalation		0.0447
274			
275	Ingestion		13.6524
276	Vegetables		13.6520
277	Milk		0.0001
278	Beef		0.0000
279	Soil\Dust		0.0003
280	Fish		0.0000
281			
282	Dermal		0.0002
283			
284	Infant		
285	Inhalation		0.0292
286			
287	Breast Milk Ingestion		4.7191
288			
290	Total		100.0000

A	B	C	AS	AT
98			TABLE 39	
99			ADULT INHALATION CARCINOGENIC RISK	
100			(These numbers are for sensitivity	
101			analysis)	
102				
103	FARM		INHALATION	
104	BASE CASE		ADULT	
105			CARC.	
106			RISK	
107				
108	ORGANICS			
109	Acrylonitrile		1.16E-14	
110	Aldrin		3.00E-18	
111	Aniline		3.64E-17	
112	Benzene		1.06E-18	
113	Bis(2-ethylhexyl)phthalate		1.09E-19	
114	Carbazole		1.28E-18	
115	Carbon Tetrachloride		2.41E-17	
116	Chloroform		1.27E-16	
117	1,4-Dichlorobenzene		5.54E-20	
118	1,1-Dichloroethane		NE	
119	1,2-Dichloroethane		2.97E-18	
120	1,1-Dichloroethene		6.72E-17	
121	1,2-Dichloropropane		1.41E-18	
122	Dieldrin		5.18E-18	
123	Hexachlorobenzene		1.37E-15	
124	Hydrazine		1.89E-11	
125	Lindane		1.95E-19	
126	Methyl chloride		2.74E-19	
127	Methylene chloride		3.67E-17	
128	4-Methylphenol		NE	
129	Monomethyl hydrazine		3.83E-13	
130	n-Nitrosodimethylamine		1.81E-14	
131	PAHS			
132	Benzo(a)pyrene		1.73E-14	
133	Chrysene		1.73E-15	
134	Dibenzo(a,h)anthracene		1.73E-14	
135	Parathion		NE	
136	Quinoline		3.84E-15	
137	Tetrachloroethene		1.98E-20	
138	Trichloroethene		7.02E-19	
139	Vapona		8.06E-19	
140	Vinyl chloride		1.08E-17	
141				
142	INORGANICS			
143	Arsenic		5.62E-13	
144	Cadmium		1.32E-15	
145	Chromium (VI)		1.39E-15	
146				
147	Total		1.99E-11	
148				
149				
150				
			INHALATION	2 YEARS
			EXPOSURE DURATION	

9.3.2 Sensitivity Case Emissions — Farmer Scenario

A	B	C	D	E	F	G	H	I	J	K
2	3	4	5	6	7	8	9	10	11	12
SENSITIVITY CASE	ER	EMISSION RATE g/sec	20-Jun-91 13:37:30 FARM	AVG. ANN. AMBIENT CONC. ug/M3	TOTAL DEPOSITION RATE g/M2/YR	DRY DEPOSITION RATE g/M2/YR	CO AVERAGE CALCULATED CONC IN SOIL .2M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .2M mg/Kg	CO AVERAGE CALCULATED CONC IN SOIL .1M mg/Kg	CO MAXIMUM CALCULATED CONC IN SOIL .1M mg/Kg
12 ORGANICS										
13 Acetone	1.26E-10			1.54E-11	3.42E-10	5.76E-11	2.37E-09	2.40E-09	4.73E-09	4.80E-09
14 Acetonitrile	1.14E-07			1.39E-08	NA	NA	NA	NA	NA	NA
15 Acrylonitrile	4.85E-08			5.92E-09	NA	NA	NA	NA	NA	NA
16 Aldrin	1.77E-13			2.16E-14	5.31E-16	8.94E-17	3.67E-15	3.73E-15	7.35E-15	7.45E-15
17 Aniline	6.41E-09			7.82E-10	1.92E-11	3.24E-12	1.33E-10	1.35E-10	2.66E-10	2.70E-10
18 Atrazine	3.96E-11			4.83E-12	1.19E-13	2.00E-14	8.22E-13	8.34E-13	1.64E-12	1.67E-12
19 Benzaldehyde	2.92E-09			3.56E-10	8.76E-12	1.47E-12	6.06E-11	6.15E-11	1.21E-10	1.23E-10
20 Benzene	3.67E-11			4.48E-12	NA	NA	NA	NA	NA	NA
21 Benzofuran	1.42E-08			1.73E-09	4.26E-11	7.17E-12	2.95E-10	2.99E-10	5.89E-10	5.98E-10
22 Benzoic Acid	1.43E-09			1.74E-10	4.29E-12	7.22E-13	2.97E-11	3.01E-11	5.94E-11	6.02E-11
23 Benzonitrile	3.12E-08			3.81E-09	9.36E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09
24 Benzothiazole	1.33E-11			1.62E-12	3.99E-14	6.72E-15	2.76E-13	2.80E-13	5.52E-13	5.60E-13
25 Biphenyl	1.43E-08			1.74E-09	NA	NA	NA	NA	NA	NA
26 Bis(2-ethylhexyl)phthalate	7.85E-12			9.58E-13	2.36E-14	3.96E-15	1.63E-13	1.65E-13	3.26E-13	3.31E-13
27 Carbazole	6.41E-11			7.82E-12	1.92E-13	3.24E-14	1.33E-12	1.35E-12	2.66E-12	2.70E-12
28 Carbon Tetrachloride	1.86E-10			2.27E-11	NA	NA	NA	NA	NA	NA
29 4-Chloroaniline	3.67E-12			4.48E-13	1.10E-14	1.85E-15	7.62E-14	7.73E-14	1.52E-13	1.55E-13
30 Chlorobenzene	8.82E-12			1.08E-12	NA	NA	NA	NA	NA	NA
31 4-Chlorobiphenyl	9.04E-12			1.10E-12	2.71E-14	4.57E-15	1.88E-13	1.90E-13	3.75E-13	3.81E-13
32 4,4'-Chlorobiphenyl	4.55E-13			5.55E-14	1.36E-15	2.30E-16	9.44E-15	9.58E-15	1.89E-14	1.92E-14
33 Chloroethane	3.24E-10			3.95E-11	9.72E-13	1.64E-13	6.72E-12	6.82E-12	1.34E-11	1.36E-11
34 Chloroform	1.58E-09			1.93E-10	NA	NA	NA	NA	NA	NA
35 Dibenzofuran	2.85E-11			3.48E-11	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
36 Dichlorobenzenes (total)	3.67E-11			4.48E-12	NA	NA	NA	NA	NA	NA
37 1,4-Dichlorobenzene	2.32E-12			2.83E-13	NA	NA	NA	NA	NA	NA
38 1,1-Dichloroethane	1.05E-10			1.28E-11	NA	NA	NA	NA	NA	NA
39 1,2-Dichloroethane	3.28E-11			4.00E-12	9.84E-14	1.66E-14	6.81E-13	6.91E-13	1.36E-12	1.38E-12
40 1,1-Dichloroethene	5.62E-11			6.86E-12	NA	NA	NA	NA	NA	NA
41 1,2-Dichloroethene	4.86E-11			5.93E-12	NA	NA	NA	NA	NA	NA
42 1,2-Dichloropropane	2.08E-11			2.54E-12	NA	NA	NA	NA	NA	NA
43 Dieldrin	3.25E-13			3.96E-14	9.75E-16	1.64E-16	6.74E-15	6.84E-15	1.35E-14	1.37E-14
44 Dimethyldisulfide	8.93E-11			1.09E-11	NA	NA	NA	NA	NA	NA
45 Hexachlorobenzene	8.59E-10			1.05E-10	2.58E-12	4.34E-13	1.78E-11	1.81E-11	3.57E-11	3.62E-11
46 Hydrazine	1.11E-06			1.35E-07	3.33E-09	5.61E-10	2.30E-08	2.34E-08	4.61E-08	4.67E-08
47 Lindane	1.51E-13			1.84E-14	4.53E-16	7.63E-17	3.13E-15	3.18E-15	6.27E-15	6.36E-15
48 Malathion	4.46E-13			5.44E-14	1.34E-15	2.25E-16	9.26E-15	9.39E-15	1.85E-14	1.88E-14
49 Methyl chloride	4.36E-11			5.32E-12	NA	NA	NA	NA	NA	NA
50 Methylene chloride	2.63E-09			3.21E-10	NA	NA	NA	NA	NA	NA
51 Methyl ethyl ketone	5.51E-11			6.10E-12	1.65E-13	2.78E-14	1.14E-12	1.16E-12	2.29E-12	2.32E-12
52 4-Methylphenol	5.00E-11			6.10E-12	1.50E-13	2.53E-14	1.04E-12	1.05E-12	2.08E-12	2.11E-12
53 Monomethyl hydrazine	3.50E-07			4.27E-08	1.05E-09	1.77E-10	7.26E-09	7.37E-09	1.45E-08	1.47E-08
54 Naphthalene	5.90E-12			7.20E-13	1.77E-14	2.98E-15	1.22E-13	1.24E-13	2.45E-13	2.48E-13
55 Naphthalene carbonitrile	3.12E-08			3.81E-09	9.36E-11	1.58E-11	6.47E-10	6.57E-10	1.29E-09	1.31E-09
56 n-Nitrosodimethylamine	3.56E-10			4.34E-11	1.07E-12	1.80E-13	7.39E-12	7.49E-12	1.48E-11	1.50E-11
57 PAHs										
58 Acenaphthalene	1.42E-09			1.73E-10	4.26E-12	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11
59 Acenaphthene	1.42E-09			1.73E-10	4.26E-12	7.17E-13	2.95E-11	2.99E-11	5.89E-11	5.98E-11
60 Benzo(a)pyrene	2.85E-09			3.48E-10	8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10

A	B	C	D	E	F	G	H	I	J	K
2			TABLE 1-A							
61	Chrysene		2.85E-10	3.48E-11	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		2.85E-09	3.48E-10	8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		2.85E-09	3.48E-11	8.55E-13	1.44E-13	5.91E-11	6.00E-12	1.18E-11	1.20E-11
64	Fluorene		2.85E-10	3.48E-11	8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		1.11E-12	1.35E-13	3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		5.70E-09	6.95E-10	1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		7.06E-13	8.61E-14	2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		3.50E-10	4.27E-11	1.05E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		5.60E-12	6.83E-13	1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		3.12E-08	3.81E-09	NA	NA	NA	NA	NA	NA
71	Quinoline		3.21E-10	3.92E-11	9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		1.72E-10	2.10E-11	5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		6.01E-12	7.33E-13	NA	NA	NA	NA	NA	NA
74	Toluene		9.59E-11	1.17E-11	NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		8.71E-11	1.06E-11	2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		6.41E-11	7.82E-12	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		1.38E-06	1.68E-07	4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		2.79E-12	3.40E-13	8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		3.96E-11	4.83E-12	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		3.67E-11	4.43E-12	NA	NA	NA	NA	NA	NA
81	Xylenes (total)		6.84E-12	8.34E-13	NA	NA	NA	NA	NA	NA
82										
83	INORGANICS									
84	Arsenic		4.24E-08	5.17E-09	1.27E-10	2.14E-11	8.80E-10	8.93E-10	1.76E-09	1.79E-09
85	Cadmium		3.10E-10	3.78E-11	9.30E-13	1.57E-13	6.43E-12	6.53E-12	1.29E-11	1.31E-11
86	Chromium (III)		1.26E-09	1.53E-10	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		4.42E-11	5.39E-12	NA	NA	NA	NA	NA	NA
88	Copper		3.17E-09	3.87E-10	NA	NA	NA	NA	NA	NA
89	Iron		9.68E-05	1.18E-05	NA	NA	NA	NA	NA	NA
90	Lead		1.63E-09	1.99E-10	4.89E-12	8.23E-13	3.38E-11	3.43E-11	6.77E-11	6.86E-11
91	Mercury		2.02E-09	2.46E-10	6.06E-12	1.02E-12	4.19E-11	4.25E-11	8.38E-11	8.51E-11
92	Selenium		5.21E-09	6.36E-10	NA	NA	NA	NA	NA	NA
93	Silver		3.24E-11	3.95E-12	NA	NA	NA	NA	NA	NA
94	Zinc		1.43E-08	1.74E-09	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 yrs ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/WET TDF

CO = D*AT*1000
SD*BD
AC = ER * DFI
D = ER * X DF

A	B	C	M	N	O	P	Q	R
2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37
38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55
56	57	58	59	60				
61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78
79	80	81	82	83	84	85	86	87
88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105
106	107	108	109	110	111	112	113	114
115	116	117	118	119	120	121	122	123
124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141
142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176	177
178	179	180	181	182	183	184	185	186
187	188	189	190	191	192	193	194	195
196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213
214	215	216	217	218	219	220	221	222
223	224	225	226	227	228	229	230	231
232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249
250	251	252	253	254	255	256	257	258
259	260	261	262	263	264	265	266	267
268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285
286	287	288	289	290	291	292	293	294
295	296	297	298	299	300	301	302	303
304	305	306	307	308	309	310	311	312
313	314	315	316	317	318	319	320	321
322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339
340	341	342	343	344	345	346	347	348
349	350	351	352	353	354	355	356	357
358	359	360	361	362	363	364	365	366
367	368	369	370	371	372	373	374	375
376	377	378	379	380	381	382	383	384
385	386	387	388	389	390	391	392	393
394	395	396	397	398	399	400	401	402
403	404	405	406	407	408	409	410	411
412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429
430	431	432	433	434	435	436	437	438
439	440	441	442	443	444	445	446	447
448	449	450	451	452	453	454	455	456
457	458	459	460	461	462	463	464	465
466	467	468	469	470	471	472	473	474
475	476	477	478	479	480	481	482	483
484	485	486	487	488	489	490	491	492
493	494	495	496	497	498	499	500	501
502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519
520	521	522	523	524	525	526	527	528
529	530	531	532	533	534	535	536	537
538	539	540	541	542	543	544	545	546
547	548	549	550	551	552	553	554	555
556	557	558	559	560	561	562	563	564
565	566	567	568	569	570	571	572	573
574	575	576	577	578	579	580	581	582
583	584	585	586	587	588	589	590	591
592	593	594	595	596	597	598	599	600
601	602	603	604	605	606	607	608	609
610	611	612	613	614	615	616	617	618
619	620	621	622	623	624	625	626	627
628	629	630	631	632	633	634	635	636
637	638	639	640	641	642	643	644	645
646	647	648	649	650	651	652	653	654
655	656	657	658	659	660	661	662	663
664	665	666	667	668	669	670	671	672
673	674	675	676	677	678	679	680	681
682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699
700	701	702	703	704	705	706	707	708
709	710	711	712	713	714	715	716	717
718	719	720	721	722	723	724	725	726
727	728	729	730	731	732	733	734	735
736	737	738	739	740	741	742	743	744
745	746	747	748	749	750	751	752	753
754	755	756	757	758	759	760	761	762
763	764	765	766	767	768	769	770	771
772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789
790	791	792	793	794	795	796	797	798
799	800	801	802	803	804	805	806	807
808	809	810	811	812	813	814	815	816
817	818	819	820	821	822	823	824	825
826	827	828	829	830	831	832	833	834
835	836	837	838	839	840	841	842	843
844	845	846	847	848	849	850	851	852
853	854	855	856	857	858	859	860	861
862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879
880	881	882	883	884	885	886	887	888
889	890	891	892	893	894	895	896	897
898	899	900	901	902	903	904	905	906
907	908	909	910	911	912	913	914	915
916	917	918	919	920	921	922	923	924
925	926	927	928	929	930	931	932	933
934	935	936	937	938	939	940	941	942
943	944	945	946	947	948	949	950	951
952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969
970	971	972	973	974	975	976	977	978
979	980	981	982	983	984	985	986	987
988	989	990	991	992	993	994	995	996
997	998	999	1000	1001	1002	1003	1004	1005
1006	1007	1008	1009	1010	1011	1012	1013	1014
1015	1016	1017	1018	1019	1020	1021	1022	1023
1024	1025	1026	1027	1028	1029	1030	1031	1032
1033	1034	1035	1036	1037	1038	1039	1040	1041
1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059
1060	1061	1062	1063	1064	1065	1066	1067	1068
1069	1070	1071	1072	1073	1074	1075	1076	1077
1078	1079	1080	1081	1082	1083	1084	1085	1086
1087	1088	1089	1090	1091	1092	1093	1094	1095
1096	1097	1098	1099	1100	1101	1102	1103	1104
1105	1106	1107	1108	1109	1110	1111	1112	1113
1114	1115	1116	1117	1118	1119	1120	1121	1122
1123	1124	1125	1126	1127	1128	1129	1130	1131
1132	1133	1134	1135	1136	1137	1138	1139	1140
1141	1142	1143	1144	1145	1146	1147	1148	1149
1150	1151	1152	1153	1154	1155	1156	1157	1158
1159	1160	1161	1162	1163	1164	1165	1166	1167
1168	1169	1170	1171	1172	1173	1174	1175	1176
1177	1178	1179	1180	1181	1182	1183	1184	1185
1186	1187	1188	1189	1190	1191	1192	1193	1194
1195	1196	1197	1198	1199	1200	1201	1202	1203
1204	1205	1206	1207	1208	1209	1210	1211	1212
1213	1214	1215	1216	1217	1218	1219	1220	1221
1222	1223	1224	1225	1226	1227	1228	1229	1230
1231	1232	1233	1234	1235	1236	1237	1238	1239
1240	1241	1242	1243	1244	1245	1246	1247	1248
1249	1250	1251	1252	1253	1254	1255	1256	1257
1258	1259	1260	1261	1262	1263	1264	1265	1266
1267	1268	1269	1270	1271	1272	1273	1274	1275
1276	1277	1278	1279	1280	1281	1282	1283	1284
1285	1286	1287	1288	1289	1290	1291	1292	1293
1294	1295	1296	1297	1298	1299	1300	1301	1302
1303	1304	1305	1306	1307	1308	1309	1310	1311
1312	1313	1314	1315	1316	1317	1318	1319	1320
1321	1322	1323	1324	1325	1326	1327	1328	1329
1330	1331	1332	1333	1334	1335	1336	1337	1338
1339	1340	1341	1342	1343	1344	1345	1346	1347
1348	1349	1350	1351	1352	1353	1354	1355	1356
1357	1358	1359	1360	1361	1362	1363	1364	1365
1366	1367	1368	1369	1370	1371	1372	1373	1374
1375	1376	1377	1378	1379				

A	B	C	M	N	O	P	Q	R
2			TABLE 1-B					
61	Chrysene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
62	Dibenzo(a,h)anthracene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
63	Fluoranthene		8.55E-12	1.44E-12	5.91E-11	6.00E-11	1.18E-10	1.20E-10
64	Fluorene		8.55E-13	1.44E-13	5.91E-12	6.00E-12	1.18E-11	1.20E-11
65	Phenanthrene		3.33E-15	5.61E-16	2.30E-14	2.34E-14	4.61E-14	4.67E-14
66	Pyrene		1.71E-11	2.88E-12	1.18E-10	1.20E-10	2.37E-10	2.40E-10
67	Parathion		2.12E-15	3.57E-16	1.47E-14	1.49E-14	2.93E-14	2.97E-14
68	Pentachlorobenzene		1.05E-12	1.77E-13	7.26E-12	7.37E-12	1.45E-11	1.47E-11
69	Phenol		1.68E-14	2.83E-15	1.16E-13	1.18E-13	2.32E-13	2.36E-13
70	Pyridine		NA	NA	NA	NA	NA	NA
71	Quinoline		9.63E-13	1.62E-13	6.66E-12	6.76E-12	1.33E-11	1.35E-11
72	Tetrachlorobenzene		5.16E-13	8.69E-14	3.57E-12	3.62E-12	7.14E-12	7.24E-12
73	Tetrachloroethene		NA	NA	NA	NA	NA	NA
74	Toluene		NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		2.61E-13	4.40E-14	1.81E-12	1.83E-12	3.61E-12	3.67E-12
76	Trichloroethene		NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		4.14E-09	6.97E-10	2.86E-08	2.91E-08	5.73E-08	5.81E-08
78	Vapona		8.37E-15	1.41E-15	5.79E-14	5.87E-14	1.16E-13	1.17E-13
79	Vinyl acetate		NA	NA	NA	NA	NA	NA
80	Vinyl chloride		NA	NA	NA	NA	NA	NA
81	Xylenes (total)		NA	NA	NA	NA	NA	NA
82								
83	INORGANICS							
84	Arsenic		1.27E-10	2.14E-11	8.80E-10	8.93E-10	1.76E-09	1.79E-09
85	Cadmium		9.30E-13	1.57E-13	6.43E-12	6.53E-12	1.29E-11	1.31E-11
86	Chromium (III)		NA	NA	NA	NA	NA	NA
87	Chromium (VI)		NA	NA	NA	NA	NA	NA
88	Copper		NA	NA	NA	NA	NA	NA
89	Iron		NA	NA	NA	NA	NA	NA
90	Lead		4.89E-12	8.23E-13	3.38E-11	3.43E-11	6.77E-11	6.86E-11
91	Mercury		6.06E-12	1.02E-12	4.19E-11	4.25E-11	8.38E-11	8.51E-11
92	Selenium		NA	NA	NA	NA	NA	NA
93	Silver		NA	NA	NA	NA	NA	NA
94	Zinc		NA	NA	NA	NA	NA	NA

2.0 YRS ACCUMULATION TIME AT
0.2 M SOIL DEPTH OF MIXING SD
0.1 M SOIL DEPTH OF MIXING SD
1.43E+03 Kg/M3 SOIL BULK DENSITY BD
1.00E+03 mg/g
3.15E+07 sec/yr

Dilution Factor
1.22E-01 INHALATION DFI
Deposition Factor DF
5.05E-04 DRY DDF
3.00E-03 DRY/NET TDF

CO = D*AT*1000
SD*BD
D = ER * x DF

TABLE 2 ADULT TOTAL EXPOSURE - AVERAGE										
A	B	C	T	U	V	W	X	Y	Z	AA
SENSITIVITY CASE			INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)
18-Jun-91										
16:44:49										
FARM										
			</							

A	B	C	T	U	V	W	X	Y	Z	AA
2			TABLE 2							
61	Chrysene		9.93E-15	1.54E-15	7.71E-17	2.11E-17	1.69E-17	3.55E-19	3.05E-17	1.16E-14
62	Dibenzo(a,h)anthracene		9.93E-14	3.38E-15	2.56E-15	5.34E-16	1.69E-16	7.95E-17	3.05E-16	1.06E-13
63	Fluoranthene		9.93E-14	2.94E-14	3.44E-16	1.10E-16	1.69E-16	NA	3.05E-17	1.30E-13
64	Fluorene		9.93E-15	3.50E-15	1.26E-17	4.60E-18	1.69E-17	2.92E-20	3.05E-17	1.35E-14
65	Phenanthrene		3.87E-17	9.94E-18	6.09E-20	2.17E-20	6.58E-20	1.01E-19	1.19E-19	4.90E-17
66	Pyrene		1.99E-13	5.48E-14	6.53E-16	2.11E-16	3.38E-16	1.60E-18	6.09E-16	2.59E-13
67	Parathion		2.46E-17	6.55E-18	1.71E-20	6.47E-21	4.19E-20	3.17E-25	7.55E-20	3.13E-17
68	Pentachlorobenzene		1.22E-14	8.20E-15	3.53E-17	1.17E-17	2.08E-17	NA	3.74E-17	2.05E-14
69	Phenol		1.95E-16	6.37E-16	1.33E-20	5.21E-21	3.32E-19	NA	5.99E-19	8.33E-16
70	Pyridine		1.09E-12	NA	NA	NA	NA	NA	NA	1.09E-12
71	Quinoline		1.12E-14	1.06E-14	1.33E-18	5.19E-19	1.90E-17	6.35E-21	3.43E-17	2.18E-14
72	Tetrachlorobenzene		6.00E-15	9.37E-15	7.55E-18	2.75E-18	1.02E-17	NA	1.84E-17	1.54E-14
73	Tetrachloroethene		2.09E-16	NA	NA	NA	NA	NA	NA	2.09E-16
74	Toluene		3.34E-15	NA	NA	NA	NA	NA	NA	3.34E-15
75	Trichlorobenzene		3.04E-15	4.40E-16	2.52E-18	9.44E-19	5.16E-18	9.59E-21	9.31E-18	3.49E-15
76	Trichloroethene		2.23E-15	NA	NA	NA	NA	NA	NA	2.23E-15
77	Unsym. dimethyl hydrazine		4.81E-11	8.55E-09	7.68E-17	3.01E-17	8.18E-14	4.39E-20	1.48E-13	8.60E-09
78	Vapona		9.73E-17	4.92E-17	6.25E-21	2.45E-21	1.65E-19	2.12E-25	2.98E-19	1.47E-16
79	Vinyl acetate		1.38E-15	NA	NA	NA	NA	NA	NA	1.38E-15
80	Vinyl chloride		1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
81	Xylenes (total)		2.38E-16	NA	NA	NA	NA	NA	NA	2.38E-16
82										
83	INORGANICS									
84	Arsenic		1.48E-12	2.79E-15	4.56E-14	5.98E-16	2.51E-15	4.89E-15	4.53E-16	1.53E-12
85	Cadmium		1.08E-14	1.85E-16	1.19E-16	5.19E-18	1.84E-17	NA	3.31E-18	1.11E-14
86	Chromium (III)		4.38E-14	NA	NA	NA	NA	NA	NA	4.38E-14
87	Chromium (VI)		1.54E-15	NA	NA	NA	NA	NA	NA	1.54E-15
88	Copper		1.10E-13	NA	NA	NA	NA	1.17E-15	NA	1.54E-15
89	Iron		3.37E-09	NA	NA	NA	NA	NA	NA	3.37E-09
90	Lead		5.68E-14	NA	NA	NA	NA	NA	NA	5.68E-14
91	Mercury		7.04E-14	1.63E-15	3.05E-16	2.29E-14	1.20E-16	NA	2.16E-17	9.54E-14
92	Selenium		1.82E-13	NA	NA	NA	NA	NA	NA	1.82E-13
93	Silver		1.13E-15	NA	NA	NA	NA	NA	NA	1.13E-15
94	Zinc		4.98E-13	NA	NA	NA	NA	2.59E-15	NA	5.01E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										

br 20 M3/day
 bw 70 kg
 ef 365 days/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf
 D*AT*1000
 SD*BD
 AC = ER * DFI
 D = ER * X DF

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
3			ADULT TOTAL EXPOSURE - MAXIMUM							
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18-Jun-91
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FARM

SENSITIVITY CASE

12 ORGANICS

INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)
4.39E-15	NA	NA	NA	NA	NA	NA	4.39E-15
3.97E-12	6.25E-11	4.84E-17	1.89E-17	6.86E-15	7.76E-21	1.24E-14	6.65E-11
1.69E-12	NA	NA	NA	NA	NA	NA	1.69E-12
6.17E-18	3.48E-17	2.90E-17	3.29E-18	1.06E-20	2.81E-27	1.92E-20	7.33E-17
2.23E-13	2.04E-13	9.30E-18	3.55E-18	3.86E-16	2.33E-19	6.95E-16	4.29E-13
1.38E-15	7.73E-16	4.33E-19	1.35E-19	2.38E-18	0.00E+00	4.29E-18	2.16E-15
1.02E-13	5.26E-14	7.73E-18	2.87E-18	1.76E-16	2.51E-20	3.17E-16	1.55E-13
1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
4.95E-13	2.79E-13	1.53E-16	4.80E-17	8.54E-16	5.53E-19	1.54E-15	7.77E-13
4.98E-14	1.94E-14	5.00E-18	2.08E-18	8.60E-17	2.20E-20	1.55E-16	6.95E-14
1.09E-12	5.26E-13	9.00E-17	3.32E-17	1.88E-15	2.99E-19	3.38E-15	1.62E-12
4.64E-16	1.67E-16	6.33E-20	2.23E-20	8.00E-19	2.51E-24	1.44E-18	6.33E-16
4.98E-13	NA	NA	NA	NA	NA	NA	4.98E-13
2.74E-16	1.18E-15	2.74E-14	3.08E-15	4.72E-19	3.25E-24	8.51E-19	3.19E-14
2.23E-15	8.73E-16	1.72E-18	4.46E-19	3.86E-18	3.31E-21	6.95E-18	3.12E-15
6.48E-15	NA	NA	NA	NA	NA	NA	6.48E-15
1.28E-16	4.09E-17	1.42E-20	5.13E-21	2.21E-19	9.45E-22	3.98E-19	1.70E-16
3.07E-16	NA	NA	NA	NA	NA	NA	3.07E-16
3.15E-16	6.61E-17	5.27E-18	7.60E-19	5.44E-19	3.39E-22	9.80E-19	3.89E-16
1.59E-17	2.69E-18	1.18E-18	1.49E-19	2.74E-20	5.71E-24	4.93E-20	2.00E-17
1.13E-14	6.04E-15	8.67E-19	3.22E-19	1.95E-17	1.91E-23	3.51E-17	1.74E-14
5.51E-14	NA	NA	NA	NA	NA	NA	5.51E-14
9.93E-15	2.73E-15	3.34E-17	6.25E-18	1.71E-17	2.19E-20	3.09E-17	1.28E-14
1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15
8.08E-17	NA	NA	NA	NA	NA	NA	8.08E-17
3.66E-15	NA	NA	NA	NA	NA	NA	3.66E-15
1.14E-15	3.86E-15	8.69E-20	3.23E-20	1.97E-18	5.73E-23	3.56E-18	5.01E-15
1.96E-15	NA	NA	NA	NA	NA	NA	1.96E-15
1.69E-15	NA	NA	NA	NA	NA	NA	1.69E-15
7.25E-16	NA	NA	NA	NA	NA	NA	7.25E-16
1.13E-17	4.28E-16	3.42E-18	4.05E-19	1.95E-20	1.08E-24	3.52E-20	4.43E-16
3.11E-15	NA	NA	NA	NA	NA	NA	3.11E-15
2.99E-14	1.18E-14	1.75E-15	2.24E-16	5.17E-17	4.30E-19	9.32E-17	4.38E-14
3.87E-11	1.45E-08	3.31E-17	1.30E-17	6.68E-14	3.52E-20	1.20E-13	1.45E-08
5.26E-18	2.43E-18	4.11E-21	1.06E-21	9.08E-21	4.73E-26	1.64E-20	7.72E-18
1.55E-17	2.89E-18	6.52E-21	1.93E-21	2.68E-20	0.00E+00	4.84E-20	1.85E-17
1.52E-15	NA	NA	NA	NA	NA	NA	1.52E-15
9.17E-14	NA	NA	NA	NA	NA	NA	9.17E-14
1.92E-15	1.51E-14	4.22E-20	1.64E-20	3.31E-18	0.00E+00	5.98E-18	1.71E-14
1.74E-15	2.48E-15	2.20E-19	7.82E-20	3.01E-18	2.71E-23	5.42E-18	4.24E-15
1.22E-11	1.71E-09	1.04E-17	4.09E-18	2.11E-14	1.12E-20	3.80E-14	1.72E-09
2.06E-16	1.15E-16	1.74E-19	4.42E-20	3.53E-19	1.48E-19	6.40E-19	3.22E-16
1.09E-12	6.09E-13	9.20E-16	2.34E-16	1.88E-15	3.42E-18	3.38E-15	1.70E-12
1.24E-14	3.72E-12	1.09E-19	4.24E-20	2.14E-17	0.00E+00	3.86E-17	3.73E-12
4.95E-14	3.20E-14	1.51E-16	2.89E-17	8.54E-17	1.05E-19	1.54E-16	8.19E-14
4.93E-14	1.48E-14	1.14E-16	2.31E-17	8.54E-17	4.07E-20	1.54E-16	6.47E-14
9.93E-14	5.79E-15	4.95E-14	5.78E-15	1.71E-16	1.40E-19	3.09E-16	1.61E-13

TABLE 3											
A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	
61		Chrysene	9.93E-15	1.95E-15	1.19E-15	1.46E-16	1.71E-17	3.55E-19	3.09E-17	1.33E-14	
62		Dibenzo(a,h)anthracene	9.93E-14	7.36E-15	5.94E-14	6.91E-15	1.71E-16	7.95E-17	3.09E-16	1.74E-13	
63		Fluoranthene	9.93E-14	3.37E-14	3.33E-15	4.46E-16	1.71E-16	NA	3.09E-16	1.37E-13	
64		Fluorene	9.93E-15	3.94E-15	5.59E-17	9.50E-18	1.71E-17	2.92E-20	3.09E-17	1.40E-14	
65		Phenanthrene	3.87E-17	1.16E-17	3.22E-19	5.12E-20	6.68E-20	1.01E-19	1.20E-19	5.10E-17	
66		Pyrene	1.99E-13	6.35E-14	6.10E-15	8.24E-16	3.43E-16	1.60E-18	6.18E-16	2.70E-13	
67		Parathion	2.46E-17	7.62E-18	4.61E-20	9.78E-21	4.25E-20	3.17E-25	7.66E-20	3.24E-17	
68		Pentachlorobenzene	1.22E-14	8.80E-15	3.01E-16	4.16E-17	2.11E-17	NA	3.80E-17	2.14E-14	
69		Phenol	1.95E-16	6.54E-16	1.45E-20	5.40E-21	3.37E-19	NA	6.07E-19	8.50E-16	
70		Pyridine	1.09E-12	NA	NA	NA	NA	NA	NA	1.09E-12	
71		Quinoline	1.12E-14	1.12E-14	1.56E-18	5.50E-19	1.93E-17	6.35E-21	3.48E-17	2.24E-14	
72		Tetrachlorobenzene	6.00E-15	9.74E-15	3.31E-17	5.64E-18	1.03E-17	NA	1.87E-17	1.58E-14	
73		Tetrachloroethene	2.09E-16	NA	NA	NA	NA	NA	NA	2.09E-16	
74		Toluene	3.34E-15	NA	NA	NA	NA	NA	NA	3.34E-15	
75		Trichlorobenzene	3.04E-15	5.67E-16	7.80E-18	1.54E-18	5.24E-18	9.59E-21	9.45E-18	3.63E-15	
76		Trichloroethene	2.23E-15	NA	NA	NA	NA	NA	NA	2.23E-15	
77		Unsym. dimethyl hydrazine	4.81E-11	8.68E-09	7.79E-17	3.05E-17	8.30E-14	4.39E-20	1.50E-13	8.73E-09	
78		Vapona	9.73E-17	5.38E-17	6.79E-21	2.53E-21	1.68E-19	2.12E-25	3.03E-19	1.52E-16	
79		Vinyl acetate	1.38E-15	NA	NA	NA	NA	NA	NA	1.38E-15	
80		Vinyl chloride	1.28E-15	NA	NA	NA	NA	NA	NA	1.28E-15	
81		Xylenes (total)	2.38E-16	NA	NA	NA	NA	NA	NA	2.38E-16	
82											
83		INORGANICS									
84		Arsenic	1.48E-12	6.14E-14	2.44E-13	2.99E-15	2.55E-15	4.89E-15	4.60E-16	1.79E-12	
85		Cadmium	1.08E-14	6.16E-16	3.61E-16	1.01E-17	1.86E-17	NA	3.36E-18	1.18E-14	
86		Chromium (III)	4.38E-14	NA	NA	NA	NA	NA	NA	4.38E-14	
87		Chromium (VI)	1.54E-15	NA	NA	NA	NA	NA	NA	1.54E-15	
88		Copper	1.10E-13	NA	NA	NA	NA	1.17E-15	NA	1.12E-13	
89		Iron	3.37E-09	NA	NA	NA	NA	NA	NA	3.37E-09	
90		Lead	5.68E-14	NA	NA	NA	NA	NA	NA	5.68E-14	
91		Mercury	7.04E-14	4.44E-15	1.01E-15	3.74E-14	1.22E-16	NA	2.19E-17	1.13E-13	
92		Selenium	1.82E-13	NA	NA	NA	NA	NA	NA	1.82E-13	
93		Silver	1.13E-15	NA	NA	NA	NA	NA	NA	1.13E-15	
94		Zinc	4.98E-13	NA	NA	NA	NA	2.59E-15	NA	5.01E-13	

br 20 M3/day
 bw 70 Kg
 ef 365 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
3			CHILD TOTAL EXPOSURE - AVERAGE							
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SENSITIVITY CASE

18-Jun-91
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FARM

ORGANICS

Acetone	9.92E-15	NA	1.32E-10	2.74E-16	NA	4.64E-17	6.11E-14	NA	NA	9.92E-15
Acetonitrile	8.97E-12	1.32E-10	1.32E-10	2.74E-16	NA	4.64E-17	6.11E-14	1.75E-20	2.08E-14	1.41E-10
Acrylonitrile	3.82E-12	NA	NA	NA	NA	NA	NA	NA	NA	3.82E-12
Aldrin	1.59E-17	7.33E-17	7.33E-17	5.52E-18	3.59E-19	3.59E-19	9.48E-20	6.34E-27	3.23E-20	9.33E-17
Aniline	5.05E-13	4.11E-13	4.11E-13	5.11E-17	8.65E-18	3.00E-19	3.43E-15	5.27E-19	1.17E-15	9.20E-13
Atrazine	3.12E-15	1.52E-15	1.52E-15	1.78E-18	3.00E-19	6.91E-18	2.12E-17	0.00E+00	7.22E-18	4.67E-15
Benzaldehyde	2.30E-13	1.02E-13	1.02E-13	4.08E-17	6.91E-18	6.91E-18	1.56E-15	5.67E-20	5.33E-16	3.34E-13
Benzene	2.89E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.89E-15
Benzofuran	1.12E-12	5.50E-13	5.50E-13	6.34E-16	1.06E-16	1.06E-16	7.60E-15	1.25E-18	2.59E-15	1.68E-12
Benzoic Acid	1.13E-13	3.67E-14	3.67E-14	2.92E-17	4.93E-18	4.93E-18	7.66E-16	4.96E-20	2.61E-16	1.50E-13
Benzonitrile	2.46E-12	1.02E-12	1.02E-12	4.72E-16	7.98E-17	7.98E-17	1.67E-14	6.74E-19	5.69E-15	3.50E-12
Benzothiazole	1.05E-15	3.13E-16	3.13E-16	3.11E-19	5.26E-20	5.26E-20	7.12E-18	5.67E-24	2.43E-18	1.37E-15
Biphenyl	1.13E-12	NA	NA	NA	NA	NA	NA	NA	NA	1.13E-12
Bis(2-ethylhexyl)phthalate	6.18E-16	2.67E-15	2.67E-15	4.64E-15	2.39E-16	2.39E-16	4.20E-18	7.34E-24	1.43E-18	7.97E-15
Carbazole	5.05E-15	1.66E-15	1.66E-15	5.28E-18	8.79E-19	8.79E-19	3.43E-17	7.46E-21	1.17E-17	6.76E-15
Carbon Tetrachloride	1.46E-14	NA	NA	NA	NA	NA	NA	NA	NA	1.46E-14
4-Chloroaniline	2.89E-16	7.55E-17	7.55E-17	7.21E-20	1.22E-20	1.22E-20	1.97E-18	2.13E-21	6.69E-19	3.67E-16
Chlorobenzene	6.94E-16	NA	NA	NA	NA	NA	NA	NA	NA	6.94E-16
4-Chlorobiphenyl	7.12E-16	1.13E-16	1.13E-16	4.22E-18	6.21E-19	6.21E-19	4.84E-18	7.66E-22	1.65E-18	8.36E-16
4,4'-Chlorobiphenyl	3.58E-17	4.37E-18	4.37E-18	5.20E-19	6.57E-20	6.57E-20	2.44E-19	1.29E-23	8.30E-20	4.11E-17
Chloroethane	2.55E-14	1.18E-14	1.18E-14	4.58E-18	7.74E-19	7.74E-19	1.74E-16	4.32E-23	5.91E-17	3.75E-14
Chloroform	1.24E-13	NA	NA	NA	NA	NA	NA	NA	NA	1.24E-13
Dibenzofuran	2.24E-14	4.94E-15	4.94E-15	5.51E-17	8.85E-18	8.85E-18	1.53E-16	4.94E-20	5.20E-17	2.76E-14
Dichlorobenzenes (total)	2.89E-15	NA	NA	NA	NA	NA	NA	NA	NA	2.89E-15
1,4-Dichlorobenzene	1.83E-16	NA	NA	NA	NA	NA	NA	NA	NA	1.83E-16
1,1-Dichloroethane	8.26E-15	NA	NA	NA	NA	NA	NA	NA	NA	8.26E-15
1,2-Dichloroethane	2.58E-15	8.09E-15	8.09E-15	4.59E-19	7.76E-20	7.76E-20	1.76E-17	1.29E-22	5.98E-18	1.07E-14
1,1-Dichloroethene	4.42E-15	NA	NA	NA	NA	NA	NA	NA	NA	4.42E-15
1,2-Dichloroethene	3.83E-15	NA	NA	NA	NA	NA	NA	NA	NA	3.83E-15
1,2-Dichloropropane	1.64E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.64E-15
Dieldrin	2.56E-17	9.06E-16	9.06E-16	9.87E-19	1.00E-19	1.00E-19	1.74E-19	2.44E-24	5.93E-20	9.33E-16
Dimethyldisulfide	7.03E-15	NA	NA	NA	NA	NA	NA	NA	NA	7.03E-15
Hexachlorobenzene	6.76E-14	2.25E-14	2.25E-14	8.40E-16	1.09E-16	1.09E-16	4.60E-16	9.71E-19	1.57E-16	9.16E-14
Hydrazine	8.74E-11	3.06E-08	3.06E-08	1.88E-16	3.19E-17	3.19E-17	5.94E-13	7.96E-20	2.02E-13	3.07E-08
Lindane	1.19E-17	4.70E-18	4.70E-18	1.26E-20	2.09E-21	2.09E-21	8.09E-20	1.07E-25	2.75E-20	1.67E-17
Malathion	3.51E-17	4.80E-18	4.80E-18	2.47E-20	4.14E-21	4.14E-21	2.39E-19	0.00E+00	8.13E-20	4.03E-17
Methyl chloride	3.43E-15	NA	NA	NA	NA	NA	NA	NA	NA	3.43E-15
Methylene chloride	2.07E-13	NA	NA	NA	NA	NA	NA	NA	NA	2.07E-13
Methyl ethyl ketone	4.34E-15	3.18E-14	3.18E-14	2.36E-19	4.00E-20	4.00E-20	2.95E-17	0.00E+00	1.00E-17	3.62E-14
4-Methylphenol	3.94E-15	5.11E-15	5.11E-15	1.09E-18	1.85E-19	1.85E-19	2.68E-17	6.13E-23	9.12E-18	9.08E-15
Monomethyl hydrazine	2.75E-11	3.59E-09	3.59E-09	5.94E-17	1.01E-17	1.01E-17	1.87E-13	2.52E-20	6.38E-14	3.62E-09
Naphthalene	4.64E-16	2.27E-16	2.27E-16	5.17E-19	8.58E-20	8.58E-20	3.16E-18	3.35E-19	1.08E-18	6.96E-16
Naphthalene carbonitrile	2.46E-12	1.20E-12	1.20E-12	2.73E-15	4.54E-16	4.54E-16	1.67E-14	7.72E-18	5.69E-15	3.88E-12
n-Nitrosodimethylamine	2.80E-14	7.87E-12	7.87E-12	6.15E-19	1.04E-19	1.04E-19	1.91E-16	0.00E+00	6.49E-17	7.90E-12
PAHs										
Acenaphthalene	1.12E-13	6.36E-14	6.36E-14	2.60E-16	4.20E-17	4.20E-17	7.60E-16	2.37E-19	2.59E-16	1.77E-13
Acenaphthene	1.12E-13	2.72E-14	2.72E-14	2.22E-16	3.62E-17	3.62E-17	7.60E-16	9.18E-20	2.59E-16	1.40E-13
Benzo(a)pyrene	2.24E-13	3.89E-15	3.89E-15	1.28E-14	1.19E-15	1.19E-15	1.53E-15	3.17E-19	5.20E-16	2.44E-13

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
61	Chrysene		2.24E-14	3.30E-15	4.45E-16	5.26E-17	1.53E-16	8.01E-19	5.20E-17	2.64E-14
62	Dibenzo(a,h)anthracene		2.24E-13	7.23E-15	1.48E-14	1.33E-15	1.53E-15	1.79E-16	5.20E-16	2.50E-13
63	Fluoranthene		2.24E-13	6.51E-14	1.99E-15	2.75E-16	1.53E-15	NA	5.20E-16	2.92E-13
64	Fluorene		2.24E-14	7.52E-15	7.30E-17	1.15E-17	1.53E-16	6.60E-20	5.20E-17	3.02E-14
65	Phenanthrene		8.74E-17	2.14E-17	3.52E-19	5.42E-20	5.94E-19	2.27E-19	2.02E-19	1.10E-16
66	Pyrene		4.49E-13	1.18E-13	3.77E-15	5.27E-16	3.05E-15	3.62E-18	1.04E-15	5.75E-13
67	Parathion		5.56E-17	1.41E-17	9.87E-20	1.61E-20	3.78E-19	7.17E-25	1.29E-19	7.03E-17
68	Pentachlorobenzene		2.75E-14	1.76E-14	2.04E-16	2.91E-17	1.87E-16	NA	6.38E-17	4.57E-14
69	Phenol		4.41E-16	1.37E-15	7.68E-20	1.30E-20	3.00E-18	NA	1.02E-18	1.81E-15
70	Pyridine		2.46E-12	NA	NA	NA	NA	NA	NA	2.46E-12
71	Quinoline		2.53E-14	2.27E-14	7.66E-18	1.29E-18	1.72E-16	1.43E-20	5.85E-17	4.82E-14
72	Tetrachlorobenzene		1.35E-14	2.01E-14	4.36E-17	6.86E-18	9.21E-17	NA	3.14E-17	3.39E-14
73	Tetrachloroethene		4.73E-16	NA	NA	NA	NA	NA	NA	4.73E-16
74	Toluene		7.54E-15	9.44E-16	1.45E-17	2.35E-18	4.66E-17	2.17E-20	1.59E-17	7.54E-15
75	Trichlorobenzene		6.86E-15	NA	NA	NA	NA	NA	NA	7.88E-15
76	Trichloroethene		5.05E-15	NA	NA	NA	NA	NA	NA	5.05E-15
77	Unsym. dimethyl hydrazine		1.09E-10	1.83E-08	4.43E-16	7.51E-17	7.39E-13	9.92E-20	2.52E-13	1.85E-08
78	Vapona		2.20E-16	1.05E-16	3.61E-20	6.11E-21	1.49E-18	4.78E-25	5.09E-19	3.27E-16
79	Vinyl acetate		3.12E-15	NA	NA	NA	NA	NA	NA	3.12E-15
80	Vinyl chloride		2.89E-13	NA	NA	NA	NA	NA	NA	2.89E-13
81	Xylenes (total)		5.38E-16	NA	NA	NA	NA	NA	NA	5.38E-16
82										
83	INORGANICS									
84	Arsenic		3.34E-12	5.08E-15	2.63E-13	1.49E-15	2.27E-14	1.10E-14	7.73E-16	3.64E-12
85	Cadmium		2.44E-14	3.58E-16	6.86E-16	1.29E-17	1.66E-16	NA	5.65E-18	2.56E-14
86	Chromium (III)		9.88E-14	NA	NA	NA	NA	NA	NA	9.88E-14
87	Chromium (VI)		3.48E-15	NA	NA	NA	NA	NA	NA	3.48E-15
88	Copper		2.50E-13	NA	NA	NA	NA	2.64E-15	NA	2.52E-13
89	Iron		7.62E-09	NA	NA	NA	NA	NA	NA	7.62E-09
90	Lead		1.28E-13	NA	NA	NA	NA	NA	NA	1.28E-13
91	Mercury		1.59E-13	3.09E-15	1.76E-15	5.70E-14	1.08E-15	NA	3.68E-17	2.22E-13
92	Selenium		4.10E-13	NA	NA	NA	NA	NA	NA	4.10E-13
93	Silver		2.55E-15	NA	NA	NA	NA	NA	NA	2.55E-15
94	Zinc		1.13E-12	NA	NA	NA	NA	5.84E-15	NA	1.13E-12
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2	TABLE 5									
3	CHILD TOTAL EXPOSURE - MAXIMUM									
4										
5	SENSITIVITY CASE									
6										
7										
8	18-Jun-91									
9	16:44:49									
10	FARM									
11										
12	ORGANICS									
13	Acetone		9.92E-15	NA	2.80E-16	NA	NA	1.75E-20	NA	9.92E-15
14	Acetonitrile		8.97E-12	1.34E-10	NA	4.71E-17	6.19E-14	NA	2.11E-14	1.43E-10
15	Acrylonitrile		3.82E-12	NA	NA	NA	NA	NA	NA	3.82E-12
16	Aldrin		1.39E-17	7.48E-17	1.67E-16	8.20E-18	9.62E-20	6.34E-27	3.28E-20	2.65E-16
17	Aniline		5.05E-13	4.33E-13	5.37E-17	8.87E-18	3.48E-15	5.27E-19	1.19E-15	9.43E-13
18	Atrazine		3.12E-15	1.64E-15	2.50E-18	3.58E-19	2.15E-17	0.00E+00	7.33E-18	4.79E-15
19	Benzaldehyde		2.30E-13	1.11E-13	4.47E-17	7.16E-18	1.59E-15	5.67E-20	5.40E-16	3.43E-13
20	Benzene		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
21	Benzofuran		1.12E-12	5.94E-13	8.85E-16	1.20E-16	7.71E-15	1.25E-18	2.63E-15	1.72E-12
22	Benzoic Acid		1.13E-13	4.09E-14	3.35E-17	5.19E-18	7.77E-16	4.96E-20	2.65E-16	1.55E-13
23	Benzonitrile		2.46E-12	1.11E-12	5.20E-16	8.29E-17	1.70E-14	6.74E-19	5.77E-15	3.59E-12
24	Benzothiazole		1.05E-14	3.52E-16	3.65E-19	5.57E-20	7.23E-18	5.67E-24	2.46E-18	1.41E-15
25	Biphenyl		1.13E-12	NA	NA	NA	NA	NA	NA	1.13E-12
26	Bis(2-ethylhexyl)phthalate		6.18E-16	2.52E-15	1.58E-13	7.67E-15	4.26E-18	7.34E-24	1.45E-18	1.69E-13
27	Carbazole		5.05E-15	1.85E-15	9.91E-18	1.11E-18	3.48E-17	7.46E-21	1.19E-17	6.95E-15
28	Carbon Tetrachloride		1.46E-14	NA	NA	NA	NA	NA	NA	1.46E-14
29	4-Chloroaniline		2.89E-16	8.60E-17	8.22E-20	1.28E-20	1.99E-18	2.13E-21	6.79E-19	3.78E-16
30	Chlorobenzene		6.94E-16	NA	NA	NA	NA	NA	NA	6.94E-16
31	4-Chlorobiphenyl		7.12E-16	1.38E-16	3.04E-17	1.90E-18	4.91E-18	7.66E-22	1.67E-18	8.89E-16
32	4,4'-Chlorobiphenyl		3.58E-17	5.60E-18	6.82E-18	3.71E-19	2.47E-19	1.29E-23	8.42E-20	4.89E-17
33	Chloroethane		2.55E-14	1.28E-14	5.01E-18	8.03E-19	1.76E-16	4.32E-23	6.00E-17	3.85E-14
34	Chloroform		1.24E-13	5.75E-15	1.93E-16	1.56E-17	1.55E-16	4.94E-20	5.27E-17	1.24E-13
35	Dibenzofuran		2.24E-14	NA	NA	NA	NA	NA	NA	2.86E-14
36	Dichlorobenzenes (total)		2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
37	1,4-Dichlorobenzene		1.83E-16	NA	NA	NA	NA	NA	NA	1.83E-16
38	1,1-Dichloroethane		8.26E-15	NA	NA	NA	NA	NA	NA	8.26E-15
39	1,2-Dichloroethane		2.58E-15	8.29E-15	5.02E-19	8.03E-20	1.78E-17	1.29E-22	6.07E-18	1.09E-14
40	1,1-Dichloroethene		4.42E-15	NA	NA	NA	NA	NA	NA	4.42E-15
41	1,2-Dichloroethene		3.83E-15	NA	NA	NA	NA	NA	NA	3.83E-15
42	1,2-Dichloropropane		1.64E-15	NA	NA	NA	NA	NA	NA	1.64E-15
43	Dieldrin		2.56E-17	9.20E-16	1.98E-17	1.01E-18	1.77E-19	2.44E-24	6.01E-20	9.66E-16
44	Dimethyldisulfide		7.03E-15	NA	NA	NA	NA	NA	NA	7.03E-15
45	Hexachlorobenzene		6.76E-14	2.50E-14	1.01E-14	5.58E-16	4.67E-16	9.71E-19	1.59E-16	1.04E-13
46	Hydrazine		8.74E-11	3.11E-08	1.91E-16	3.24E-17	6.03E-13	7.96E-20	2.05E-13	3.12E-08
47	Lindane		1.19E-17	5.15E-18	2.37E-20	2.65E-21	8.20E-20	1.07E-25	2.79E-20	1.72E-17
48	Malathion		3.51E-17	6.01E-18	3.77E-20	4.81E-21	2.42E-19	0.00E+00	8.25E-20	4.15E-17
49	Methyl chloride		3.43E-15	NA	NA	NA	NA	NA	NA	3.43E-15
50	Methylene chloride		2.07E-13	NA	NA	NA	NA	NA	NA	2.07E-13
51	Methyl ethyl ketone		4.34E-15	3.24E-14	2.44E-19	4.08E-20	2.99E-17	0.00E+00	1.02E-17	3.68E-14
52	4-Methylphenol		3.94E-15	5.31E-15	1.27E-18	1.95E-19	2.72E-17	6.13E-23	9.25E-18	9.29E-15
53	Monomethyl hydrazine		2.75E-11	3.64E-09	6.03E-17	1.02E-17	1.90E-13	2.52E-20	6.48E-14	3.67E-09
54	Naphthalene		4.64E-16	2.45E-16	1.00E-18	1.10E-19	3.21E-18	3.35E-19	1.09E-18	7.15E-16
55	Naphthalene carbonitrile		2.46E-12	1.30E-12	5.31E-15	5.83E-16	1.70E-14	7.72E-18	5.77E-15	3.78E-12
56	n-Nitrosodimethylamine		2.80E-14	7.99E-12	6.27E-19	1.06E-19	1.93E-16	0.00E+00	6.59E-17	8.02E-12
57	PAHs									
58	Acenaphthalene		1.12E-13	6.81E-14	8.72E-16	7.20E-17	7.71E-16	2.37E-19	2.63E-16	1.82E-13
59	Acenaphthene		1.12E-13	3.12E-14	6.56E-16	5.75E-17	7.71E-16	9.18E-20	2.63E-16	1.45E-13
60	Benzo(a)pyrene		2.24E-13	1.13E-14	2.86E-13	1.44E-14	1.55E-15	3.17E-19	5.27E-16	5.38E-13

A B		C	AX	AY	AZ	BA	BB	BC	BD	BE
2			TABLE 5							
61		Chrysene	2.24E-14	4.08E-15	6.85E-15	3.63E-16	1.55E-16	8.01E-19	5.27E-17	3.39E-14
62		Dibenzo(a,h)anthracene	2.24E-13	1.46E-14	3.43E-13	1.72E-14	1.55E-15	1.79E-16	5.27E-16	6.01E-13
63		Fluorene	2.24E-14	7.14E-15	1.92E-14	1.11E-15	1.55E-15	NA	5.27E-17	3.18E-13
64		Fluorene	2.24E-14	8.36E-15	3.23E-16	2.37E-17	1.55E-15	6.60E-20	5.27E-17	3.13E-14
65		Phenanthrene	8.74E-17	2.45E-17	1.86E-18	1.28E-19	6.03E-19	2.27E-19	2.05E-19	1.15E-16
66		Pyrene	4.49E-13	1.34E-13	3.52E-14	2.05E-15	3.10E-15	3.62E-18	1.05E-15	6.24E-13
67		Parathion	5.55E-17	1.61E-17	2.66E-19	2.44E-20	3.84E-19	7.17E-25	1.31E-19	7.25E-17
68		Pentachlorobenzene	2.75E-14	1.88E-14	1.74E-15	1.04E-16	1.90E-16	NA	6.48E-17	4.84E-14
69		Phenol	4.41E-16	1.40E-15	8.38E-20	1.35E-20	3.04E-18	NA	1.04E-18	1.85E-15
70		Pyridine	2.46E-12	NA	NA	NA	NA	NA	NA	2.46E-12
71		Quinoline	2.53E-14	2.39E-14	9.03E-18	1.37E-18	1.74E-16	1.43E-20	5.94E-17	4.94E-14
72		Tetrachlorobenzene	1.35E-14	2.09E-14	1.91E-16	1.41E-17	9.34E-17	NA	3.18E-17	3.47E-14
73		Tetrachloroethene	4.73E-16	NA	NA	NA	NA	NA	4.73E-16	7.54E-15
74		Toluene	7.54E-15	NA	NA	NA	NA	NA	NA	7.54E-15
75		Trichlorobenzene	6.86E-15	1.18E-15	4.50E-17	3.85E-18	4.73E-17	2.17E-20	1.61E-17	8.15E-15
76		Trichloroethene	5.05E-15	NA	NA	NA	NA	NA	NA	5.05E-15
77		Unsym. dimethyl hydrazine	1.09E-10	1.86E-08	4.50E-16	7.62E-17	7.50E-13	9.92E-20	2.55E-13	1.87E-08
78		Vapona	2.20E-16	1.14E-16	3.92E-20	6.32E-21	1.52E-18	4.78E-25	5.16E-19	3.35E-16
79		Vinyl acetate	3.12E-15	NA	NA	NA	NA	NA	NA	3.12E-15
80		Vinyl chloride	2.89E-15	NA	NA	NA	NA	NA	NA	2.89E-15
81		Xylenes (total)	5.38E-16	NA	NA	NA	NA	NA	NA	5.38E-16
82										
83		INORGANICS								
84		Arsenic	3.34E-12	1.14E-13	1.41E-12	7.46E-15	2.30E-14	1.10E-14	7.85E-16	4.90E-12
85		Cadmium	2.44E-14	1.16E-15	2.08E-15	2.51E-17	1.68E-16	NA	5.74E-18	2.78E-14
86		Chromium (III)	9.88E-14	NA	NA	NA	NA	NA	NA	9.88E-14
87		Chromium (VI)	3.48E-15	NA	NA	NA	NA	NA	NA	3.48E-15
88		Copper	2.50E-13	NA	NA	NA	NA	2.64E-15	NA	2.52E-13
89		Iron	7.62E-09	NA	NA	NA	NA	NA	NA	7.62E-09
90		Lead	1.28E-13	NA	NA	NA	NA	NA	NA	1.28E-13
91		Mercury	1.59E-13	8.31E-15	5.86E-15	9.33E-14	1.10E-15	NA	3.74E-17	2.68E-13
92		Selenium	4.10E-13	NA	NA	NA	NA	NA	NA	4.10E-13
93		Silver	2.55E-15	NA	NA	NA	NA	NA	NA	2.55E-15
94		Zinc	1.13E-12	NA	NA	NA	NA	5.84E-15	NA	1.13E-12
95										
96										
97										
98										
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100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair*br/bw/ugmg

A	B	C	BH	BI	BJ
2			TABLE 6		
3			INFANT TOTAL EXPOSURE		
4					
5					
6					
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18-Jun-91
16:44:49
FARM

-----MAXIMUM-----

INHALATION BREAST MILK TOTAL
(mg/kg/day) (mg/kg/day) (mg/kg/day)

ORGANICS

Acetone	6.49E-15	1.13E-16	6.60E-15
Acetonitrile	5.87E-12	2.42E-10	2.48E-10
Acrylonitrile	2.50E-12	7.71E-15	2.51E-12
Aldrin	9.12E-18	2.67E-16	2.76E-16
Aniline	3.30E-13	1.56E-12	1.89E-12
Atrazine	2.04E-15	7.86E-15	9.90E-15
Benzaldehyde	1.50E-13	5.64E-13	7.14E-13
Benzene	1.89E-15	2.19E-18	1.89E-15
Benzo(a)pyrene	7.31E-13	2.83E-12	3.56E-12
Benzoic Acid	7.37E-14	2.53E-13	3.27E-13
Benzonitrile	1.61E-12	5.89E-12	7.50E-12
Benzothiazole	6.85E-16	2.30E-15	2.99E-15
Biphenyl	7.37E-13	1.28E-14	7.49E-13
Bis(2-ethylhexyl)phthalate	4.04E-16	1.16E-13	1.17E-13
Carbazole	3.30E-15	1.14E-14	1.47E-14
Carbon Tetrachloride	9.58E-15	1.66E-16	9.75E-15
4-Chloroaniline	1.89E-16	6.17E-16	8.06E-16
Chlorobenzene	4.54E-16	7.89E-18	4.62E-16
4-Chlorobiphenyl	4.66E-16	1.41E-15	1.88E-15
4,4'-Chlorobiphenyl	2.34E-17	7.26E-17	9.61E-17
Chloroethane	1.67E-14	6.33E-14	8.00E-14
Chloroform	8.14E-14	1.41E-15	8.28E-14
Dibenzofuran	1.47E-14	4.64E-14	6.11E-14
Dichlorobenzenes (total)	1.89E-15	3.28E-17	1.92E-15
1,4-Dichlorobenzene	1.19E-16	2.07E-18	1.22E-16
1,1-Dichloroethane	5.41E-15	9.39E-17	5.50E-15
1,2-Dichloroethane	1.69E-15	1.82E-14	1.99E-14
1,1-Dichloroethene	2.89E-15	5.03E-17	2.95E-15
1,2-Dichloroethene	2.50E-15	4.35E-17	2.55E-15
1,2-Dichloropropane	1.07E-15	1.86E-17	1.09E-15
Dieldrin	1.67E-17	1.61E-15	1.63E-15
Dimethyldisulfide	4.60E-15	7.99E-17	4.68E-15
Hexachlorobenzene	4.42E-14	3.60E-14	8.02E-14
Hydrazine	5.72E-11	5.29E-08	5.30E-08
Lindane	7.78E-18	2.81E-17	3.59E-17
Malathion	2.30E-17	6.74E-17	9.04E-17
Methyl chloride	2.25E-15	3.90E-17	2.28E-15
Methylene chloride	1.35E-13	2.35E-15	1.38E-13
Methyl ethyl ketone	2.84E-15	6.21E-14	6.49E-14
4-Methylphenol	2.58E-15	1.54E-14	1.80E-14
Monomethyl hydrazine	1.80E-11	6.27E-09	6.29E-09
Naphthalene	3.04E-16	1.17E-15	1.48E-15
Naphthalene carbonitrile	1.61E-12	6.20E-12	7.80E-12
n-Nitrosodimethylamine	1.83E-14	1.36E-11	1.36E-11
PAHs			
Acenaphthalene	7.31E-14	2.98E-13	3.71E-13
Acenaphthene	7.31E-14	2.35E-13	3.08E-13
Benzo(a)pyrene	1.47E-13	5.86E-13	7.32E-13

A	B	C	BH	BI	BJ
2			TABLE 6		
61		Chrysene	1.47E-14	4.83E-14	6.30E-14
62		Dibenzo(a,h)anthracene	1.47E-13	6.32E-13	7.79E-13
63		Fluoranthene	1.47E-13	5.00E-13	6.47E-13
64		Fluorene	1.47E-14	5.09E-14	6.56E-14
65		Phenanthrene	5.72E-17	1.86E-16	2.43E-16
66		Pyrene	2.94E-13	9.83E-13	1.28E-12
67		Parathion	3.64E-17	1.18E-16	1.54E-16
68		Pentachlorobenzene	1.80E-14	1.76E-14	3.56E-14
69		Phenol	2.88E-16	3.09E-15	3.38E-15
70		Pyridine	1.61E-12	2.79E-14	1.64E-12
71		Quinoline	1.65E-14	8.16E-14	9.82E-14
72		Tetrachlorobenzene	8.86E-15	1.30E-14	2.18E-14
73		Tetrachloroethene	3.10E-16	5.37E-18	3.15E-16
74		Toluene	4.93E-15	1.43E-17	4.95E-15
75		Trichlorobenzene	4.49E-15	2.98E-15	7.46E-15
76		Trichloroethene	3.30E-15	5.73E-17	3.36E-15
77		Unsym. dimethyl hydrazine	7.11E-11	3.18E-08	3.18E-08
78		Vapona	1.44E-16	5.51E-16	6.95E-16
79		Vinyl acetate	2.04E-15	3.54E-17	2.08E-15
80		Vinyl chloride	1.89E-15	3.28E-17	1.92E-15
81		Xylenes (total)	3.52E-16	2.04E-19	3.53E-16
82					
83		INORGANICS			
84		Arsenic	2.18E-12	NE	2.18E-12
85		Cadmium	1.60E-14	NE	1.60E-14
86		Chromium (III)	6.47E-14	NE	6.47E-14
87		Chromium (VI)	2.28E-15	NE	2.28E-15
88		Copper	1.63E-13	NE	1.63E-13
89		Iron	4.99E-09	NE	4.99E-09
90		Lead	8.40E-14	NE	8.40E-14
91		Mercury	1.04E-13	NE	1.04E-13
92		Selenium	2.68E-13	NE	2.68E-13
93		Silver	1.67E-15	NE	1.67E-15
94		Zinc	7.37E-13	NE	7.37E-13
95					
96					
97					
98					
99					
100					
101					
102					
103					

br 3.80E+00 M3/day
bw 9.00E+00 Kg
um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A B C D E F G

TABLE 28
CARCINOGENIC SLOPE FACTORS ((mg/kg-day)⁻¹)

			Inhalation Slope Factor	Oral Slope Factor	Dermal Slope Factor	
103 FARM						
104 SENSITIVITY CASE						
105						
106						
107						
108 ORGANICS						
109 Acrylonitrile			2.40E-01	5.40E-01	NC	
110 Aldrin			1.70E+01	1.70E+01	3.40E+01	
111 Aniline			5.70E-03	5.70E-03	1.14E-02	
112 Benzene			2.90E-02	2.90E-02	NC	
113 Bis(2-ethylhexyl)phthalate			1.40E-02	1.40E-02	2.80E-02	
114 Carbazole			2.00E-02	2.00E-02	4.00E-02	
115 Carbon Tetrachloride			1.30E-01	1.30E-01	NC	
116 Chloroform			8.10E-02	6.10E-03	NC	
117 1,4-Dichlorobenzene			2.40E-02	2.40E-02	NC	
118 1,1-Dichloroethane						
119 1,2-Dichloroethane			9.10E-02	9.10E-02	1.82E-01	
120 1,1-Dichloroethene			1.20E+00	6.00E-01	NC	
121 1,2-Dichloropropane			6.80E-02	6.80E-02	NC	
122 Dieldrin			1.60E+01	1.60E+01	3.20E+01	
123 Hexachlorobenzene			1.60E+00	1.60E+00	3.20E+00	
124 Hydrazine			1.71E+01	3.00E+00	6.00E+00	
125 Lindane			1.30E+00	1.30E+00	2.60E+00	
126 Methyl chloride			6.30E-03	1.30E-02	NC	
127 Methylene chloride			1.40E-02	7.50E-03	NC	
128 4-Methylphenol						
129 Monomethyl hydrazine			1.10E+00	1.10E+00	2.20E+00	
130 n-Nitrosodimethylamine			5.10E+01	5.10E+01	1.02E+02	
131 PAHs						
132 Benzo(a)pyrene			6.10E+00	1.15E+01	2.30E+01	
133 Chrysene			6.10E+00	1.15E+01	2.30E+01	
134 Dibenz(a,h)anthracene			6.10E+00	1.15E+01	2.30E+01	
135 Parathion						
136 Quinoline			1.20E+01	1.20E+01	2.40E+01	
137 Tetrachloroethene			3.30E-03	5.10E-02	NC	
138 Trichloroethene			1.10E-02	1.10E-02	NC	
139 Vapona			2.90E-01	2.90E-01	5.80E-01	
140 Vinyl chloride			2.95E-01	2.30E+00	NC	
141						
142 INORGANICS						
143 Arsenic			1.50E+01	1.75E+00	3.50E+01	
144 Cadmium			6.10E+00	NC	NC	
145 Chromium (VI)			4.10E+01	NC	NC	
146						
147 Total						
148						
149						
150						
151						
152						
153						

AED Adult Exposure Duration 64
CED Child Exposure Duration 5
CID Child Inhalation Duration 1
IED Infant Exposure Duration 1
IID Infant Inhalation Duration 1

A	B	C	I	J	K	L	M	N	O
98			TABLE 29						
99			ADULT CARCINOGENIC RISK						
100									
101									
102	FARM		VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
103	SENSITIVITY CASE		INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	ADULT
104			CARC.	CARC.	CARC.	CARC.	CARC.	CARC.	CARC.
105			RISK	RISK	RISK	RISK	RISK	RISK	RISK
106									
107									
108	ORGANICS								
109	Acrylonitrile		NA	NA	NA	NA	NA	NA	NA
110	Aldrin		5.30E-16	1.49E-17	2.24E-18	1.63E-19	4.36E-26	5.88E-19	5.48E-16
111	Aniline		1.00E-15	4.61E-20	1.81E-20	1.98E-18	1.22E-21	7.14E-18	1.01E-15
112	Benzene		NA	NA	NA	NA	NA	NA	NA
113	Bis(2-ethylhexyl)phthalate		1.47E-17	1.03E-17	1.23E-18	5.96E-21	4.16E-26	2.15E-20	2.62E-17
114	Carbazole		1.41E-17	1.67E-20	6.44E-21	6.95E-20	6.04E-23	2.51E-19	1.45E-17
115	Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA
116	Chloroform		NA	NA	NA	NA	NA	NA	NA
117	1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		3.13E-16	6.61E-21	2.59E-21	1.62E-19	4.76E-24	5.83E-19	3.14E-16
120	1,1-Dichloroethene		NA	NA	NA	NA	NA	NA	NA
121	1,2-Dichloropropane		NA	NA	NA	NA	NA	NA	NA
122	Dieldrin		6.16E-15	2.50E-18	5.89E-19	2.82E-19	1.58E-23	1.02E-18	6.17E-15
123	Hexachlorobenzene		1.53E-14	2.13E-16	6.42E-17	7.45E-17	6.29E-19	2.69E-16	1.59E-14
124	Hydrazine		3.92E-08	8.95E-17	3.51E-17	1.81E-13	9.66E-20	6.51E-13	3.92E-08
125	Lindane		2.60E-18	2.59E-21	9.96E-22	1.06E-20	5.62E-26	3.84E-20	2.65E-18
126	Methyl chloride		NA	NA	NA	NA	NA	NA	NA
127	Methylene chloride		NA	NA	NA	NA	NA	NA	NA
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		1.69E-09	1.03E-17	4.06E-18	2.09E-14	1.12E-20	7.53E-14	1.70E-09
130	n-Nitrosodimethylamine		1.71E-10	4.97E-18	1.95E-18	9.84E-16	0.00E+00	3.55E-15	1.71E-10
131	PAHs								
132	Benzo(a)pyrene		1.92E-14	2.32E-14	5.01E-15	1.78E-15	1.47E-18	6.41E-15	5.56E-14
133	Chrysene		1.61E-14	8.11E-16	2.22E-16	1.78E-16	3.73E-18	6.41E-16	1.80E-14
134	Dibenzo(a,h)anthracene		3.55E-14	2.69E-14	5.62E-15	1.78E-15	8.35E-16	6.41E-15	7.70E-14
135	Parathion		NE	NE	NE	NE	NE	NE	NE
136	Quinoline		1.16E-13	1.46E-17	5.69E-18	2.09E-16	6.96E-20	7.53E-16	1.17E-13
137	Tetrachloroethene		NA	NA	NA	NA	NA	NA	NA
138	Trichloroethene		NA	NA	NA	NA	NA	NA	NA
139	Vapona		1.30E-17	1.66E-21	6.49E-22	4.39E-20	5.61E-26	1.58E-19	1.33E-17
140	Vinyl chloride		NA	NA	NA	NA	NA	NA	NA
141									
142	INORGANICS								
143	Arsenic		4.46E-15	7.30E-14	9.56E-16	4.02E-15	7.82E-15	1.45E-14	1.05E-13
144	Cadmium		NA	NA	NA	NA	NA	NA	NA
145	Chromium (VI)		NA	NA	NA	NA	NA	NA	NA
146									
147	Total		4.11E-08	1.24E-13	1.19E-14	2.10E-13	8.66E-15	7.59E-13	4.11E-08

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	Q	R	S	T	U	V	W	X
98	99	100	101	102	103	104	105	106	107	
108	109	110	111	112	113	114	115	116	117	118
119	120	121	122	123	124	125	126	127	128	129
130	131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147				
148	149	150	151	152	153	154	155	156	157	158
159	160	161	162	163	164	165	166	167	168	169
170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191
192	193	194	195	196	197	198	199	200	201	202
203	204	205	206	207	208	209	210	211	212	213
214	215	216	217	218	219	220	221	222	223	224
225	226	227	228	229	230	231	232	233	234	235
236	237	238	239	240	241	242	243	244	245	246
247	248	249	250	251	252	253	254	255	256	257
258	259	260	261	262	263	264	265	266	267	268
269	270	271	272	273	274	275	276	277	278	279
280	281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300	301
302	303	304	305	306	307	308	309	310	311	312
313	314	315	316	317	318	319	320	321	322	323
324	325	326	327	328	329	330	331	332	333	334
335	336	337	338	339	340	341	342	343	344	345
346	347	348	349	350	351	352	353	354	355	356
357	358	359	360	361	362	363	364	365	366	367
368	369	370	371	372	373	374	375	376	377	378
379	380	381	382	383	384	385	386	387	388	389
390	391	392	393	394	395	396	397	398	399	400
401	402	403	404	405	406	407	408	409	410	411
412	413	414	415	416	417	418	419	420	421	422
423	424	425	426	427	428	429	430	431	432	433
434	435	436	437	438	439	440	441	442	443	444
445	446	447	448	449	450	451	452	453	454	455
456	457	458	459	460	461	462	463	464	465	466
467	468	469	470	471	472	473	474	475	476	477
478	479	480	481	482	483	484	485	486	487	488
489	490	491	492	493	494	495	496	497	498	499
500	501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520	521
522	523	524	525	526	527	528	529	530	531	532
533	534	535	536	537	538	539	540	541	542	543
544	545	546	547	548	549	550	551	552	553	554
555	556	557	558	559	560	561	562	563	564	565
566	567	568	569	570	571	572	573	574	575	576
577	578	579	580	581	582	583	584	585	586	587
588	589	590	591	592	593	594	595	596	597	598
599	600	601	602	603	604	605	606	607	608	609
610	611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630	631
632	633	634	635	636	637	638	639	640	641	642
643	644	645	646	647	648	649	650	651	652	653
654	655	656	657	658	659	660	661	662	663	664
665	666	667	668	669	670	671	672	673	674	675
676	677	678	679	680	681	682	683	684	685	686
687	688	689	690	691	692	693	694	695	696	697
698	699	700	701	702	703	704	705	706	707	708
709	710	711	712	713	714	715	716	717	718	719
720	721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740	741
742	743	744	745	746	747	748	749	750	751	752
753	754	755	756	757	758	759	760	761	762	763
764	765	766	767	768	769	770	771	772	773	774
775	776	777	778	779	780	781	782	783	784	785
786	787	788	789	790	791	792	793	794	795	796
797	798	799	800	801	802	803	804	805	806	807
808	809	810	811	812	813	814	815	816	817	818
819	820	821	822	823	824	825	826	827	828	829
830	831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850	851
852	853	854	855	856	857	858	859	860	861	862
863	864	865	866	867	868	869	870	871	872	873
874	875	876	877	878	879	880	881	882	883	884
885	886	887	888	889	890	891	892	893	894	895
896	897	898	899	900	901	902	903	904	905	906
907	908	909	910	911	912	913	914	915	916	917
918	919	920	921	922	923	924	925	926	927	928
929	930	931	932	933	934	935	936	937	938	939
940	941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960	961
962	963	964	965	966	967	968	969	970	971	972
973	974	975	976	977	978	979	980	981	982	983
984	985	986	987	988	989	990	991	992	993	994
995	996	997	998	999	1000	1001	1002	1003	1004	1005
1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016
1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027
1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038
1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049
1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060
1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071
1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082
1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093
1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104
1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115
1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126
1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137
1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148
1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159
1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170
1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181
1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192
1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203
1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214
1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225
1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236
1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247
1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258
1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269
1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280
1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291
1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302
1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313
1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324
1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335
1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346
1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357
1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368
1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379
1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390
1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401
1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412
1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423
1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434
1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445
1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456
1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467
1468	1469	1470								

A	B	C	Z	AA	AB
98			TABLE 31		
99			INFANT CARCINOGENIC RISK		
100					
101					
102					
103	FARM				
104	SENSITIVITY CASE				
105			INHALATION	BREAST MILK	TOTAL
106			CARC.	INGESTION	INFANT
107			RISK	RISK	CARC.
108	ORGANICS				RISK
109	Acrylonitrile		8.57E-15	5.95E-17	8.63E-15
110	Aldrin		2.21E-18	6.48E-17	6.70E-17
111	Aniline		2.69E-17	1.27E-16	1.54E-16
112	Benzene		7.83E-19	9.06E-22	7.84E-19
113	Bis(2-ethylhexyl)phthalate		8.09E-20	2.32E-17	2.33E-17
114	Carbazole		9.43E-19	3.24E-18	4.19E-18
115	Carbon Tetrachloride		1.78E-17	3.09E-19	1.81E-17
116	Chloroform		9.42E-17	1.23E-19	9.43E-17
117	1,4-Dichlorobenzene		4.10E-20	7.11E-22	4.17E-20
118	1,1-Dichloroethane		NE	NE	NE
119	1,2-Dichloroethane		2.20E-18	2.37E-17	2.59E-17
120	1,1-Dichloroethene		4.96E-17	4.31E-19	5.01E-17
121	1,2-Dichloropropane		1.04E-18	1.81E-20	1.06E-18
122	Dieldrin		3.83E-18	3.68E-16	3.72E-16
123	Hexachlorobenzene		1.01E-15	8.23E-16	1.83E-15
124	Hydrazine		1.40E-11	2.27E-09	2.28E-09
125	Lindane		1.44E-19	5.22E-19	6.66E-19
126	Methyl chloride		2.02E-19	7.24E-21	2.09E-19
127	Methylene chloride		2.71E-17	2.52E-19	2.73E-17
128	4-Methylphenol		NE	NE	NE
129	Monomethyl hydrazine		2.83E-13	9.85E-11	9.88E-11
130	n-Nitrosodimethylamine		1.34E-14	9.88E-12	9.90E-12
131	PAHs				
132	Benzo(a)pyrene		1.28E-14	9.62E-14	1.09E-13
133	Chrysene		1.28E-15	7.93E-15	9.21E-15
134	Dibenzo(a,h)anthracene		1.28E-14	1.04E-13	1.17E-13
135	Parathion		NE	NE	NE
136	Quinoline		2.83E-15	1.40E-14	1.68E-14
137	Tetrachloroethene		1.46E-20	3.92E-21	1.85E-20
138	Trichloroethene		5.19E-19	9.01E-21	5.28E-19
139	Vapona		5.95E-19	2.28E-18	2.88E-18
140	Vinyl chloride		7.97E-18	1.08E-18	9.05E-18
141					
142	INORGANICS				
143	Arsenic		4.68E-13	NA	4.68E-13
144	Cadmium		1.39E-15	NA	1.39E-15
145	Chromium (VI)		1.33E-15	NA	1.33E-15
146					
147	Total		1.48E-11	2.38E-09	2.39E-09

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK	AL
98			TABLE 32								
99			TOTAL LIFETIME CARCINOGENIC RISK								
100											
101											
102	FARM		INHALATION	BREAST MILK	VEGETABLE	MILK	BEEF	SOIL/DUST	FISH	DERMAL	TOTAL
103	SENSITIVITY CASE		CARC. RISK	INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	INGESTION	EXPOSURE	LIFETIME
104											CARC. RISK
105											
106											
107											
108	ORGANICS										
109	Acrylonitrile		2.17E-14	5.95E-17	NA	2.16E-17	NA	NA	NA	NA	2.17E-14
110	Aldrin		5.60E-18	6.48E-17	6.19E-16	6.69E-20	2.67E-18	2.78E-19	5.13E-26	6.67E-19	7.14E-16
111	Aniline		6.80E-17	1.27E-16	1.17E-15	NA	2.16E-20	3.38E-18	1.43E-21	8.09E-18	1.38E-15
112	Benzene		1.98E-18	9.06E-22	NA	NA	NA	NA	NA	NA	1.98E-18
113	Bis(2-ethylhexyl)phthalate		2.04E-19	2.32E-17	1.72E-17	1.49E-17	1.47E-18	1.02E-20	4.89E-26	2.43E-20	5.70E-17
114	Carbazole		2.38E-18	3.24E-18	1.65E-17	2.43E-20	7.70E-21	1.19E-19	7.11E-23	2.84E-19	2.26E-17
115	Carbon Tetrachloride		4.50E-17	3.09E-19	NA	NA	NA	NA	NA	NA	4.53E-17
116	Chloroform		2.38E-16	1.23E-19	NA	NA	NA	NA	NA	NA	2.38E-16
117	1,4-Dichlorobenzene		1.04E-19	7.11E-22	NA	NA	NA	NA	NA	NA	1.04E-19
118	1,1-Dichloroethane		NE	NE	NE	NE	NE	NE	NE	NE	NE
119	1,2-Dichloroethane		5.55E-18	2.37E-17	3.66E-16	9.59E-21	3.09E-21	2.76E-19	5.60E-24	6.61E-19	3.96E-16
120	1,1-Dichloroethene		1.25E-16	4.31E-19	NA	NA	NA	NA	NA	NA	1.26E-16
121	1,2-Dichloropropane		2.63E-18	1.81E-20	NA	NA	NA	NA	NA	NA	2.65E-18
122	Dieldrin		9.67E-18	3.68E-16	7.20E-15	3.63E-18	7.04E-19	4.81E-19	1.86E-23	1.15E-18	7.58E-15
123	Hexachlorobenzene		2.56E-15	8.23E-16	1.79E-14	3.09E-16	7.67E-17	1.27E-16	7.40E-19	3.04E-16	2.20E-14
124	Hydrazine		3.53E-11	2.27E-09	4.58E-08	1.30E-16	4.19E-17	3.08E-13	1.14E-19	7.38E-13	4.81E-08
125	Lindane		3.65E-19	5.22E-19	3.04E-18	3.76E-21	1.19E-21	1.82E-20	6.61E-26	4.35E-20	3.99E-18
126	Methyl chloride		5.11E-19	7.24E-21	NA	NA	NA	NA	NA	NA	5.18E-19
127	Methylene chloride		6.85E-17	2.52E-19	NA	NA	NA	NA	NA	NA	6.87E-17
128	4-Methylphenol		NE	NE	NE	NE	NE	NE	NE	NE	NE
129	Monomethyl hydrazine		7.16E-13	9.85E-11	1.98E-09	1.50E-17	4.89E-18	3.56E-14	1.32E-20	8.53E-14	2.08E-09
130	n-Nitrosodimethylamine		3.38E-14	9.88E-12	1.99E-10	7.21E-18	2.33E-18	1.68E-15	0.00E+00	4.02E-15	2.09E-10
131	PAHs										
132	Benzo(a)pyrene		3.23E-14	9.62E-14	2.24E-14	3.37E-14	5.99E-15	3.03E-15	1.73E-18	7.26E-15	2.01E-13
133	Chrysene		3.23E-15	7.93E-15	1.89E-14	1.18E-15	2.65E-16	3.03E-16	4.39E-18	7.26E-16	3.25E-14
134	Dibenzo(a,h)anthracene		3.23E-14	1.04E-13	4.14E-14	3.90E-14	6.71E-15	3.03E-15	9.83E-16	7.26E-15	2.35E-13
135	Parathion		NE	NE	NE	NE	NE	NE	NE	NE	NE
136	Quinoline		7.17E-15	1.40E-14	1.36E-13	2.11E-17	6.80E-18	3.56E-16	8.19E-20	8.53E-16	1.58E-13
137	Tetrachloroethene		3.69E-20	3.92E-21	NA	NA	NA	NA	NA	NA	4.08E-20
138	Trichloroethene		1.31E-18	9.01E-21	NA	NA	NA	NA	NA	NA	1.32E-18
139	Vapona		1.51E-18	2.28E-18	1.52E-17	2.41E-21	7.76E-22	7.48E-20	6.60E-26	1.79E-19	1.93E-17
140	Vinyl chloride		2.01E-17	1.08E-18	NA	NA	NA	NA	NA	NA	2.12E-17
141											
142	INORGANICS										
143	Arsenic		1.18E-12	NA	5.09E-15	1.06E-13	1.14E-15	6.86E-15	9.20E-15	1.64E-14	1.33E-12
144	Cadmium		3.52E-15	NA	NA	NA	NA	NA	NA	NA	3.52E-15
145	Chromium (VI)		3.37E-15	NA	NA	NA	NA	NA	NA	NA	3.37E-15
146											
147	Total		3.74E-11	2.38E-09	4.79E-08	1.80E-13	1.42E-14	3.59E-13	1.02E-14	8.60E-13	5.04E-08

A	B	C	AN	AO	AP	AQ
98			TABLE 33			
99			TOTAL LIFETIME			
100			CARCINOGENIC RISK			
101						
102			INHALATION	INGESTION	DERMAL	TOTAL
103	FARM		CARC.	CARC.	CARC.	LIFETIME
104	SENSITIVITY CASE		RISK	RISK	RISK	CARC.
105						RISK
106						
107						
108	ORGANICS					
109	Acrylonitrile		2.17E-14	5.95E-17	NA	2.17E-14
110	Aldrin		5.60E-18	7.08E-16	6.67E-19	7.14E-16
111	Aniline		6.80E-17	1.30E-15	8.09E-18	1.38E-15
112	Benzene		1.98E-18	9.06E-22	NA	1.98E-18
113	Bis(2-ethylhexyl)phthalate		2.04E-19	5.68E-17	2.43E-20	5.70E-17
114	Carbazole		2.38E-18	1.99E-17	2.84E-19	2.26E-17
115	Carbon Tetrachloride		4.50E-17	3.09E-19	NA	4.53E-17
116	Chloroform		2.38E-16	1.23E-19	NA	2.38E-16
117	1,4-Dichlorobenzene		1.04E-19	7.11E-22	NA	1.04E-19
118	1,1-Dichloroethane		NE	NE	NE	NE
119	1,2-Dichloroethane		5.55E-18	3.90E-16	6.61E-19	3.96E-16
120	1,1-Dichloroethene		1.23E-16	4.31E-19	NA	1.26E-16
121	1,2-Dichloropropane		2.63E-18	1.81E-20	NA	2.65E-18
122	Dieldrin		9.67E-18	7.57E-15	1.15E-18	7.58E-15
123	Hexachlorobenzene		2.56E-15	1.92E-14	3.04E-16	2.20E-14
124	Hydrazine		3.53E-11	4.80E-08	7.38E-13	4.81E-08
125	Lindane		3.63E-19	3.58E-18	4.35E-20	3.99E-18
126	Methyl chloride		5.11E-19	7.24E-21	NA	5.18E-19
127	Methylene chloride		6.85E-17	2.52E-19	NA	6.87E-17
128	4-Methylphenol		NE	NE	NE	NE
129	Monomethyl hydrazine		7.16E-13	2.08E-09	8.53E-14	2.08E-09
130	n-Nitrosodimethylamine		3.38E-14	2.09E-10	4.02E-15	2.09E-10
131	PAHs					
132	Benzo(a)pyrene		3.23E-14	1.61E-13	7.26E-15	2.01E-13
133	Chrysene		3.23E-15	2.85E-14	7.26E-16	3.25E-14
134	Dibenzo(a,h)anthracene		3.23E-14	1.95E-13	7.26E-15	2.35E-13
135	Parathion		NE	NE	NE	NE
136	Quinoline		7.17E-15	1.50E-13	8.53E-16	1.58E-13
137	Tetrachloroethene		3.69E-20	3.92E-21	NA	4.08E-20
138	Trichloroethene		1.31E-18	9.01E-21	NA	1.32E-18
139	Vapona		1.51E-18	1.76E-17	1.79E-19	1.93E-17
140	Vinyl chloride		2.01E-17	1.08E-18	NA	2.12E-17
141						
142	INORGANICS					
143	Arsenic		1.18E-12	1.28E-13	1.64E-14	1.33E-12
144	Cadmium		3.52E-15	NA	NA	3.52E-15
145	Chromium (VI)		3.37E-15	NA	NA	3.37E-15
146						
147	Total		3.74E-11	5.03E-08	8.60E-13	5.04E-08

TABLE 34
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D Inhalation Rfd	E Oral Rfd	F Dermal Rfd
155	161 FARM			
156	162 SENSITIVITY CASE			
157	163			
158	164			
159	165			
160	166 ORGANICS			
161	Acetone	1.82E+00	1.00E-01	NC
162	Acetonitrile	1.00E-02	6.00E-02	3.00E-02
163	Acrylonitrile	4.39E-03	2.70E-04	NC
164	Aldrin	2.55E-04	3.00E-05	1.50E-05
165	Aniline	7.76E-03	1.95E-03	9.75E-04
166	Atrazine	5.10E-03	5.00E-03	2.50E-03
167	Benzaldehyde	1.00E-01	1.00E-01	5.00E-02
168	Benzene	3.26E-02	1.00E-03	NC
169	Benzofuran	5.00E-03	5.00E-03	2.50E-03
170	Benzoic Acid	4.00E+00	4.00E+00	2.00E+00
171	Benzonitrile	8.00E-03	8.00E-03	4.00E-03
172	Benzothiazole	1.00E-03	1.00E-03	5.00E-04
173	Biphenyl	1.33E-03	5.00E-02	NC
174	Bis(2-ethylhexyl)phthalate	5.10E-03	4.00E-03	1.00E-02
175	Carbazole	5.00E-03	5.00E-03	2.50E-03
176	Carbon Tetrachloride	3.16E-02	7.00E-04	NC
177	4-Chloroaniline	4.00E-03	4.00E-03	2.00E-03
178	Chlorobenzene	5.00E-03	2.00E-02	NC
179	4-Chlorobiphenyl	2.45E-02	2.45E-02	1.22E-02
180	4,4'-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
181	Chloroethane	2.65E+00	NA	NC
182	Chloroform	5.00E-02	1.00E-02	NC
183	Dibenzofuran	NA	NA	NA
184	Dichlorobenzenes (total)	4.00E-02	9.00E-02	NC
185	1,1-Dichloroethane	1.00E-01	1.00E-01	NC
186	1,2-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
187	1,1-Dichloroethene	2.04E-02	9.00E-03	NC
188	1,2-Dichloroethene	8.10E-01	2.00E-02	NC
189	1,2-Dichloropropane	3.54E-01	8.60E-03	NC
190	Dieldrin	2.55E-04	5.00E-05	2.50E-05
191	Dimethyldisulfide	8.10E-03	8.10E-03	NC
192	Hexachlorobenzene	8.00E-04	8.00E-04	4.00E-04
193	Hydrazine	1.33E-04	6.00E-04	3.00E-04
194	Lindane	5.10E-04	3.00E-04	1.50E-04
195	Malathion	1.02E-02	2.00E-02	1.00E-02
196	Methyl chloride	1.05E-01	1.80E-02	NC
197	Methylene chloride	8.57E-01	6.00E-02	NC
198	Methyl ethyl ketone	9.00E-02	5.00E-01	2.50E-01
199	4-Methylphenol	1.02E-02	5.00E-02	2.50E-02
200	Monomethyl hydrazine	1.94E-05	2.20E-04	1.10E-04
201	Naphthalene	5.10E-02	4.00E-03	2.00E-03
202	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
203	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
204	PAHs			
205	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
206	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
207	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
208	Chrysene	3.00E-02	3.00E-02	1.50E-02

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155 B	C	D	E	F
156		TABLE 34		
215	Dibenzo(a,h)anthracene	3.00E-02	3.00E-02	1.50E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Fluorene	4.00E-02	4.00E-02	2.00E-02
218	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
219	Pyrene	3.00E-02	3.00E-02	1.50E-02
220	Parathion	5.10E-05	6.00E-03	3.00E-03
221	Pentachlorobenzene	8.00E-04	8.00E-04	4.00E-04
222	Phenol	1.94E-02	6.00E-01	3.00E-01
223	Pyridine	1.63E-02	1.00E-03	NC
224	Quinoline	2.00E-01	2.00E-01	1.00E-01
225	Tetrachlorobenzene	3.00E-04	3.00E-04	1.50E-04
226	Tetrachloroethene	3.46E-01	1.00E-02	NC
227	Toluene	5.71E-01	2.00E-01	NC
228	Trichlorobenzene	3.00E-03	2.00E-02	1.00E-02
229	Trichloroethene	2.74E-01	7.35E-03	NC
230	Unsym. dimethyl hydrazine	1.22E-03	1.22E-03	6.10E-04
231	Vapona	8.00E-04	8.00E-04	4.00E-04
232	Vinyl acetate	2.00E-01	1.00E+00	NC
233	Vinyl chloride	1.33E-02	1.30E-03	NC
234	Xylenes (total)	8.57E-02	2.00E+00	NC
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

ROCKY MOUNTAIN ARSENAL - 18-Jun-91

TABLE 35 ADULT HAZARD INDEX										O																																																	
C	H	I	J	K	L	M	N	O																																																			
B	H	I	J	K	L	M	N	O																																																			
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214
155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	17																																										

B	C	H	I	J	K	L	M	N	O
155		TABLE 35							
156									
215	Dibenzo(a,h)anthracene	3.31E-12	2.45E-13	1.98E-12	2.30E-13	5.71E-15	2.65E-15	2.06E-14	5.80E-12
216	Fluoranthene	2.48E-12	8.43E-13	8.33E-14	1.12E-14	4.29E-15	NA	1.55E-14	3.44E-12
217	Fluorene	2.48E-13	9.86E-14	1.40E-15	2.38E-16	4.29E-16	7.30E-19	1.55E-15	3.51E-13
218	Phenanthrene	1.29E-15	3.87E-16	1.07E-17	1.71E-18	2.23E-18	3.35E-18	8.03E-18	1.70E-15
219	Pyrene	6.62E-12	2.12E-12	2.03E-13	2.75E-14	1.14E-14	5.35E-17	4.12E-14	9.02E-12
220	Parathion	4.83E-13	1.27E-15	7.68E-18	1.63E-18	7.08E-18	5.29E-23	2.55E-17	4.84E-13
221	Pentachlorobenzene	1.52E-11	1.10E-11	3.76E-13	5.19E-14	2.63E-14	NA	9.49E-14	2.68E-11
222	Phenol	1.01E-14	1.09E-15	2.42E-20	9.00E-21	5.61E-19	NA	2.02E-18	1.12E-14
223	Pyridine	6.67E-11	NA	NA	NA	NA	NA	NA	6.67E-11
224	Quinoline	5.59E-14	5.59E-14	7.82E-18	2.75E-18	9.65E-17	3.17E-20	3.48E-16	1.12E-13
225	Tetrachlorobenzene	2.00E-11	3.25E-11	1.10E-13	1.88E-14	3.45E-14	NA	1.24E-13	5.27E-11
226	Tetrachloroethene	6.05E-16	NA	NA	NA	NA	NA	NA	6.05E-16
227	Toluene	5.85E-15	2.83E-14	3.90E-16	7.72E-17	2.62E-16	4.80E-19	9.45E-16	5.85E-15
228	Trichlorobenzene	1.01E-12	NA	NA	NA	NA	NA	NA	1.04E-12
229	Trichloroethene	8.15E-15	NA	NA	NA	NA	NA	NA	8.15E-15
230	Unsym. dimethyl hydrazine	3.94E-08	7.12E-06	6.39E-14	2.50E-14	6.80E-11	3.60E-17	2.45E-10	7.15E-06
231	Vapona	1.22E-13	6.72E-14	8.48E-18	3.17E-18	2.10E-16	2.64E-22	7.56E-16	1.90E-13
232	Vinyl acetate	6.90E-15	NA	NA	NA	NA	NA	NA	6.90E-15
233	Vinyl chloride	9.62E-14	NA	NA	NA	NA	NA	NA	9.62E-14
234	Xylenes (total)	2.78E-15	NA	NA	NA	NA	NA	NA	2.78E-15
235									
236	INORGANICS								
237	Arsenic	7.24E-09	6.14E-11	2.44E-10	2.99E-12	2.55E-12	4.89E-12	9.20E-12	7.57E-09
238	Cadmium	2.12E-10	6.16E-13	3.61E-13	1.01E-14	1.86E-14	NA	6.72E-14	2.13E-10
239	Chromium (III)	8.58E-11	NA	NA	NA	NA	NA	NA	8.58E-11
240	Chromium (VI)	3.02E-11	NA	NA	NA	NA	NA	NA	3.02E-11
241	Copper	1.10E-11	NA	NA	NA	NA	3.08E-14	NA	1.11E-11
242	Iron	3.31E-06	NA	NA	NA	NA	NA	NA	3.31E-06
243	Mercury	8.22E-10	1.48E-11	3.38E-12	1.25E-10	4.05E-13	NA	1.46E-12	9.66E-10
244	Selenium	8.90E-10	NA	NA	NA	NA	NA	NA	8.90E-10
245	Silver	1.11E-10	NA	NA	NA	NA	NA	NA	1.11E-10
246	Zinc	6.09E-11	NA	NA	NA	NA	1.29E-14	NA	6.09E-11
247									
248	Total (Hazard Index)	4.28E-06	3.91E-05	2.62E-10	1.30E-10	2.79E-10	4.94E-12	1.01E-09	4.34E-05

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155 B	C	Q	R	S	T	U	V	W	X
156		TABLE 36							
157		CHILD HAZARD INDEX							
158									
159									
160									
161 FARM									
162 SENSITIVITY CASE									
163									
164									
165									
166 ORGANICS									
167	Acetone	5.45E-15	NA	4.66E-15	NA	1.03E-12	NA	7.03E-13	5.45E-15
168	Acetonitrile	8.97E-10	2.23E-09	NA	7.85E-16	NA	2.92E-19	NA	3.13E-09
169	Acrylonitrile	8.70E-10	NA	NA	NA	NA	NA	NA	8.70E-10
170	Aldrin	5.46E-14	2.49E-12	5.58E-12	2.73E-13	3.21E-15	2.11E-22	2.18E-15	8.41E-12
171	Aniline	6.50E-11	2.22E-10	2.75E-14	4.55E-15	1.79E-12	2.70E-16	1.22E-12	2.90E-10
172	Atrazine	6.11E-13	3.29E-13	5.00E-16	6.75E-17	4.30E-15	0.00E+00	2.93E-15	9.48E-13
173	Benzaldehyde	2.30E-12	1.11E-12	4.47E-16	7.16E-17	1.59E-14	5.67E-19	1.08E-14	3.44E-12
174	Benzene	8.86E-14	NA	NA	NA	NA	NA	NA	8.86E-14
175	Benzofuran	2.24E-10	1.19E-10	1.77E-13	2.39E-14	1.54E-12	2.50E-16	1.05E-12	3.45E-10
176	Benzoic Acid	2.81E-14	1.02E-14	8.37E-18	1.30E-18	1.94E-16	1.24E-20	1.32E-16	3.87E-14
177	Benzonitrile	3.07E-10	1.39E-10	6.50E-14	1.04E-14	2.12E-12	8.43E-17	1.44E-12	4.50E-10
178	Benzothiazole	1.05E-12	3.52E-13	3.65E-16	5.57E-17	7.23E-15	5.67E-21	4.92E-15	1.41E-12
179	Biphenyl	8.46E-10	NA	NA	NA	NA	NA	NA	8.46E-10
180	Bis(2-ethylhexyl)phthalate	1.21E-13	6.31E-13	3.95E-11	1.92E-12	1.07E-15	1.83E-21	1.45E-16	4.22E-11
181	Carbazole	1.01E-12	3.70E-13	1.98E-15	2.22E-16	6.97E-15	1.49E-18	4.74E-15	1.39E-12
182	Carbon Tetrachloride	4.63E-13	NA	NA	NA	NA	NA	NA	4.63E-13
183	4-Chloroaniline	7.22E-14	2.15E-14	2.05E-17	3.20E-18	4.98E-16	5.34E-19	3.40E-16	9.46E-14
184	Chlorobenzene	1.39E-13	NA	NA	NA	NA	NA	NA	1.39E-13
185	4-Chlorobiphenyl	2.90E-14	5.64E-15	1.24E-15	7.73E-17	2.00E-16	3.13E-20	1.37E-16	3.63E-14
186	4,4'-Chlorobiphenyl	1.54E-15	2.40E-16	2.93E-16	1.59E-17	1.06E-17	5.53E-22	7.26E-18	2.10E-15
187	Chloroethane	9.62E-15	NE	NE	NE	NE	NE	NE	9.62E-15
188	Chloroform	2.49E-12	NA	NA	NA	NA	NA	NA	2.49E-12
189	Dibenzofuran	NE	NE	NE	NE	NE	NE	NE	NE
190	Dichlorobenzenes (total)	7.22E-14	NA	NA	NA	NA	NA	NA	7.22E-14
191	1,1-Dichloroethane	8.26E-14	NA	NA	NA	NA	NA	NA	8.26E-14
192	1,2-Dichloroethane	6.33E-14	1.70E-12	1.03E-16	1.65E-17	3.64E-15	2.64E-20	2.48E-15	1.77E-12
193	1,1-Dichloroethene	2.17E-13	NA	NA	NA	NA	NA	NA	2.17E-13
194	1,2-Dichloroethene	4.72E-15	NA	NA	NA	NA	NA	NA	4.72E-15
195	1,2-Dichloropropane	4.62E-15	NA	NA	NA	NA	NA	NA	4.62E-15
196	Dieldrin	1.00E-13	1.84E-11	3.95E-13	2.02E-14	3.53E-15	4.87E-20	2.41E-15	4.62E-15
197	Dimethyldisulfide	8.68E-13	NA	NA	NA	NA	NA	NA	1.89E-11
198	Hexachlorobenzene	8.45E-11	3.12E-11	1.26E-11	6.97E-13	5.83E-13	1.21E-15	3.97E-13	8.68E-13
199	Hydrazine	6.57E-07	5.18E-05	3.18E-13	5.39E-14	1.01E-09	1.33E-16	6.85E-10	1.30E-10
200	Lindane	2.35E-14	1.72E-14	7.91E-17	8.84E-18	2.73E-16	3.56E-22	1.86E-16	5.25E-05
201	Malathion	3.44E-15	3.01E-16	1.88E-18	2.41E-19	1.21E-17	0.00E+00	8.25E-18	4.10E-14
202	Methyl chloride	3.27E-14	NA	NA	NA	NA	NA	NA	3.76E-15
203	Methylene chloride	2.42E-13	NA	NA	NA	NA	NA	NA	3.27E-14
204	Methyl ethyl ketone	4.82E-14	6.49E-14	4.87E-19	8.16E-20	5.99E-17	0.00E+00	4.08E-17	2.42E-13
205	4-Methylphenol	3.86E-13	1.06E-13	2.54E-17	3.90E-18	1.23E-21	1.23E-21	3.70E-16	1.13E-13
206	Monomethyl hydrazine	1.42E-06	1.66E-05	2.74E-13	4.64E-14	8.64E-10	1.14E-16	5.89E-10	4.93E-13
207	Naphthalene	9.11E-15	6.13E-14	2.51E-16	2.76E-17	8.01E-16	8.38E-17	5.46E-16	1.80E-05
208	Naphthalene carbonitrile	4.82E-11	3.24E-10	1.33E-12	1.46E-13	4.24E-12	1.93E-15	2.89E-12	7.21E-14
209	n-Nitrosodimethylamine	1.00E-10	2.85E-08	2.24E-15	3.78E-16	6.91E-13	0.00E+00	4.71E-13	3.81E-10
210	PAHs								2.86E-08
211	Acenaphthalene	1.86E-12	1.14E-12	1.45E-14	1.20E-15	1.29E-14	3.95E-18	8.76E-15	3.04E-12
212	Acenaphthene	1.86E-12	5.20E-13	1.09E-14	9.58E-16	1.29E-14	1.53E-18	8.76E-15	2.42E-12
213	Benzo(a)pyrene	7.48E-12	3.75E-13	9.53E-12	4.80E-13	5.16E-14	1.06E-17	3.52E-14	1.79E-11
214	Chrysene	7.48E-13	1.36E-13	2.28E-13	1.21E-14	5.16E-15	2.67E-17	3.52E-15	1.13E-11

155 B	C	Q	R	S	T	U	V	W	X
156		TABLE 36							
215	Dibenzo(a,h)anthracene	7.48E-12	4.88E-13	1.14E-11	5.74E-13	5.16E-14	5.98E-15	3.52E-14	2.01E-11
216	Fluoranthene	5.61E-12	1.78E-12	4.81E-13	2.78E-14	3.87E-14	NA	2.64E-14	7.97E-12
217	Fluorene	5.61E-13	2.09E-13	8.07E-15	5.92E-16	3.87E-15	1.65E-18	2.64E-15	7.85E-13
218	Phenanthrene	2.91E-15	8.17E-16	6.19E-17	4.26E-18	2.01E-17	7.57E-18	1.37E-17	3.84E-15
219	Pyrene	1.50E-11	4.47E-12	1.17E-12	6.85E-14	1.03E-13	1.21E-16	7.03E-14	2.08E-11
220	Parathion	1.09E-12	2.68E-15	4.43E-17	4.06E-18	6.39E-17	1.19E-22	4.35E-17	1.09E-12
221	Pentachlorobenzene	3.44E-11	2.35E-11	2.17E-12	1.30E-13	2.38E-13	NA	1.62E-13	6.06E-11
222	Phenol	2.27E-14	2.34E-15	1.40E-19	2.24E-20	5.07E-18	NA	3.45E-18	2.51E-14
223	Pyridine	1.51E-10	NA	NA	NA	NA	NA	NA	1.51E-10
224	Quinoline	1.26E-13	1.19E-13	4.51E-17	6.86E-18	8.72E-16	7.16E-20	5.94E-16	2.47E-13
225	Tetrachlorobenzene	4.51E-11	6.96E-11	6.37E-13	4.69E-14	3.11E-13	NA	2.12E-13	1.16E-10
226	Tetrachloroethene	1.37E-15	NA	NA	NA	NA	NA	NA	1.37E-15
227	Toluene	1.32E-14	NA	NA	NA	NA	NA	NA	1.32E-14
228	Trichlorobenzene	2.29E-12	5.91E-14	2.25E-15	1.93E-16	2.37E-15	1.08E-18	1.61E-15	2.35E-12
229	Trichloroethene	1.84E-14	NA	NA	NA	NA	NA	NA	1.84E-14
230	Unsym. dimethyl hydrazine	8.90E-08	1.53E-05	3.69E-13	6.24E-14	6.15E-10	8.13E-17	4.19E-10	1.53E-05
231	Vapona	2.74E-13	1.42E-13	4.90E-17	7.90E-18	1.89E-15	5.97E-22	1.29E-15	4.20E-13
232	Vinyl acetate	1.56E-14	NA	NA	NA	NA	NA	NA	1.56E-14
233	Vinyl chloride	2.17E-13	NA	NA	NA	NA	NA	NA	2.17E-13
234	Xylenes (total)	6.28E-15	NA	NA	NA	NA	NA	NA	6.28E-15
235									
236	INORGANICS								
237	Arsenic	1.64E-08	1.14E-10	1.41E-09	7.46E-12	2.30E-11	1.10E-11	1.57E-11	1.79E-08
238	Cadmium	4.78E-10	1.16E-12	2.08E-12	2.51E-14	1.68E-13	NA	1.15E-13	4.82E-10
239	Chromium (III)	1.94E-10	NA	NA	NA	NA	NA	NA	1.94E-10
240	Chromium (VI)	6.82E-11	NA	NA	NA	NA	NA	NA	6.82E-11
241	Copper	2.50E-11	NA	NA	NA	NA	6.95E-14	NA	2.50E-11
242	Iron	7.47E-06	NA	NA	NA	NA	NA	NA	7.47E-06
243	Mercury	1.86E-09	2.77E-11	1.95E-11	3.11E-10	3.66E-12	NA	2.49E-12	2.22E-09
244	Selenium	2.01E-09	NA	NA	NA	NA	NA	NA	2.01E-09
245	Silver	2.50E-10	NA	NA	NA	NA	NA	NA	2.50E-10
246	Zinc	1.37E-10	NA	NA	NA	NA	2.92E-14	NA	1.37E-10
247									
248	Total (Hazard Index)	9.66E-06	8.37E-05	1.51E-09	3.23E-10	2.52E-09	1.11E-11	1.72E-09	9.33E-05

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155	B	C	Z	AA	AB
156			TABLE 37		
157			INFANT HAZARD INDEX		
158					
159					
160					
161	FARM				
162	SENSITIVITY CASE				
163					
164					
165					
166	ORGANICS				
167	Acetone		3.57E-15	1.13E-15	4.69E-15
168	Acetonitrile		5.87E-10	4.03E-09	4.62E-09
169	Acrylonitrile		5.69E-10	2.86E-11	5.98E-10
170	Aldrin		3.58E-14	8.89E-12	8.93E-12
171	Aniline		4.25E-11	8.00E-10	8.43E-10
172	Atrazine		4.00E-13	1.57E-12	1.97E-12
173	Benzaldehyde		1.50E-12	5.64E-12	7.14E-12
174	Benzene		5.80E-14	2.19E-15	6.02E-14
175	Benzo(furan		1.46E-10	5.65E-10	7.12E-10
176	Benzoic Acid		1.84E-14	6.32E-14	8.16E-14
177	Benzonitrile		2.01E-10	7.37E-10	9.38E-10
178	Benzothiazole		6.85E-13	2.30E-12	2.99E-12
179	Biphenyl		5.54E-10	2.56E-13	5.54E-10
180	Bis(2-ethylhexyl)phthalate		7.93E-14	2.90E-11	2.91E-11
181	Carbazole		6.60E-13	2.27E-12	2.93E-12
182	Carbon Tetrachloride		3.03E-13	2.58E-13	5.41E-13
183	4-Chloroaniline		4.73E-14	1.54E-13	2.01E-13
184	Chlorobenzene		9.09E-14	3.94E-16	9.13E-14
185	4-Chlorobiphenyl		1.90E-14	5.77E-14	7.67E-14
186	4,4'-Chlorobiphenyl		1.01E-15	3.12E-15	4.12E-15
187	Chloroethane		6.30E-15	NE	6.30E-15
188	Chloroform		1.63E-12	1.41E-13	1.77E-12
189	Dibenzofuran		NE	NE	NE
190	Dichlorobenzenes (total)		4.73E-14	3.65E-16	4.76E-14
191	1,1-Dichloroethane		5.41E-14	9.39E-16	5.50E-14
192	1,2-Dichloroethane		4.14E-14	3.73E-12	3.77E-12
193	1,1-Dichloroethene		1.42E-13	5.58E-15	1.47E-13
194	1,2-Dichloroethene		3.09E-15	2.17E-15	5.26E-15
195	1,2-Dichloropropane		3.03E-15	2.16E-15	5.19E-15
196	Dieldrin		6.57E-14	3.22E-11	3.23E-11
197	Dimethyldisulfide		5.68E-13	9.86E-15	5.78E-13
198	Hexachlorobenzene		5.53E-11	4.50E-11	1.00E-10
199	Hydrazine		4.30E-07	8.82E-05	8.86E-05
200	Lindane		1.53E-14	9.37E-14	1.09E-13
201	Malathion		2.25E-15	3.37E-15	5.62E-15
202	Methyl chloride		2.14E-14	2.17E-15	2.36E-14
203	Methylene chloride		1.58E-13	3.92E-14	1.97E-13
204	Methyl ethyl ketone		3.15E-14	1.24E-13	1.56E-13
205	4-Methylphenol		2.53E-13	3.08E-13	5.61E-13
206	Monomethyl hydrazine		9.29E-07	2.85E-05	2.94E-05
207	Naphthalene		5.95E-15	2.93E-13	2.99E-13
208	Naphthalene carbonitrile		3.15E-11	1.55E-09	1.58E-09
209	n-Nitrosodimethylamine		6.55E-11	4.85E-08	4.85E-08
210	PAHS				
211	Acenaphthalene		1.22E-12	4.97E-12	6.18E-12
212	Acenaphthene		1.22E-12	3.92E-12	5.14E-12
213	Benzo(a)pyrene		4.89E-12	1.95E-11	2.44E-11
214	Chrysene		4.89E-13	1.61E-12	2.10E-12

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

155	B	C	Z	AA	AB
156			TABLE 37		
215		Dibenzo(a,h)anthracene	4.89E-12	2.11E-11	2.60E-11
216		Fluoranthene	3.67E-12	1.25E-11	1.62E-11
217		Fluorene	3.67E-13	1.27E-12	1.64E-12
218		Phenanthrene	1.91E-15	6.18E-15	8.09E-15
219		Pyrene	9.79E-12	3.28E-11	4.25E-11
220		Parathion	7.13E-13	1.97E-14	7.33E-13
221		Pentachlorobenzene	2.25E-11	2.20E-11	4.45E-11
222		Phenol	1.49E-14	5.15E-15	2.00E-14
223		Pyridine	9.86E-11	2.79E-11	1.26E-10
224		Quinoline	8.27E-14	4.08E-13	4.91E-13
225		Tetrachlorobenzene	2.95E-11	4.32E-11	7.28E-11
226		Tetrachloroethene	8.95E-16	5.37E-16	1.43E-15
227		Toluene	8.64E-15	7.14E-17	8.71E-15
228		Trichlorobenzene	1.50E-12	1.49E-13	1.64E-12
229		Trichloroethene	1.21E-14	7.80E-15	1.98E-14
230		Unsym. dimethyl hydrazine	5.83E-08	2.60E-05	2.61E-05
231		Vapona	1.80E-13	6.89E-13	8.69E-13
232		Vinyl acetate	1.02E-14	3.54E-17	1.02E-14
233		Vinyl chloride	1.42E-13	2.52E-14	1.67E-13
234		Xylenes (total)	4.11E-15	1.02E-19	4.11E-15
235					
236	INORGANICS				
237		Arsenic	1.07E-08	NE	1.07E-08
238		Cadmium	3.13E-10	NE	3.13E-10
239		Chromium (III)	1.27E-10	NE	1.27E-10
240		Chromium (VI)	4.46E-11	NE	4.46E-11
241		Copper	1.63E-11	NE	1.63E-11
242		Iron	4.89E-06	NE	4.89E-06
243		Mercury	1.21E-09	NE	1.21E-09
244		Selenium	1.32E-09	NE	1.32E-09
245		Silver	1.64E-10	NE	1.64E-10
246		Zinc	8.99E-11	NE	8.99E-11
247					
248		Total (Hazard Index)	6.32E-06	1.43E-04	1.49E-04

A	B	C	D
253	TABLE 38		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256			
257	FARM		
258	SENSITIVITY CASE		
259			
260	Adult		NA
261	Inhalation		
262			
263	Ingestion		81.5526
264	Vegetables		81.5519
265	Milk		0.0002
266	Beef		0.0000
267	Soil\Dust		0.0004
268	Fish		0.0000
269			
270	Dermal		0.0015
271			
272	Child		
273	Inhalation		0.0448
274			
275	Ingestion		13.6524
276	Vegetables		13.6520
277	Milk		0.0001
278	Beef		0.0000
279	Soil\Dust		0.0003
280	Fish		0.0000
281			
282	Dermal		0.0002
283			
284	Infant		
285	Inhalation		0.0293
286			
287	Breast Milk Ingestion		4.7191
288			
290	Total		100.0000

A	B	C	AS	AT
98			TABLE 39	
99			ADULT INHALATION CARCINOGENIC RISK	
100			(These numbers are for sensitivity	
101			analysis)	
102				
103	FARM		INHALATION	
104	SENSITIVITY CASE		ADULT	
105			CARC.	
106			RISK	
107				
108	ORGANICS			
109	Acrylonitrile		1.16E-14	
110	Aldrin		3.00E-18	
111	Aniline		3.64E-17	
112	Benzene		1.06E-18	
113	Bis(2-ethylhexyl)phthalate		1.09E-19	
114	Carbazole		1.28E-18	
115	Carbon Tetrachloride		2.41E-17	
116	Chloroform		1.27E-16	
117	1,4-Dichlorobenzene		5.54E-20	
118	1,1-Dichloroethane		NE	
119	1,2-Dichloroethane		2.97E-18	
120	1,1-Dichloroethene		6.72E-17	
121	1,2-Dichloropropane		1.41E-18	
122	Dieldrin		5.18E-18	
123	Hexachlorobenzene		1.37E-15	
124	Hydrazine		1.89E-11	
125	Lindane		1.95E-19	
126	Methyl chloride		2.74E-19	
127	Methylene chloride		3.67E-17	
128	4-Methylphenol		NE	
129	Monomethyl hydrazine		3.83E-13	
130	n-Nitrosodimethylamine		1.81E-14	
131	PAHs			
132	Benzo(a)pyrene		1.73E-14	
133	Chrysene		1.73E-15	
134	Dibenzo(a,h)anthracene		1.73E-14	
135	Parathion		NE	
136	Quinoline		3.84E-15	
137	Tetrachloroethene		1.98E-20	
138	Trichloroethene		7.02E-19	
139	Vapona		8.06E-19	
140	Vinyl chloride		1.08E-17	
141				
142	INORGANICS			
143	Arsenic		6.33E-13	
144	Cadmium		1.88E-15	
145	Chromium (VI)		1.80E-15	
146				
147	Total		2.00E-11	
148				
149				
150				

INHALATION
EXPOSURE DURATION

2 YEARS

9.4 WORKER SCENARIO

9.4.1 Base Case Emissions — Worker Scenario

A	B	C	D	E	F	G	H	I	J	K
2	3	4	5	6	7	8	9	10	11	12
BASE CASE	ER	AC	ANN.	AVG.	TOTAL	DRY	CO	CO	CO	CO
20-Jun-91	EMISSION	AMBIENT	CONC.	CONC.	DEPOSITION	DEPOSITION	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
13:40:09	RATE	CONC.	CONC.	CONC.	RATE	RATE	CONC IN	CONC IN	CONC IN	CONC IN
WORKER	g/sec	ug/M3	ug/M3	ug/M3	g/M2/Yr	g/M2/Yr	SOIL	SOIL	SOIL	SOIL
							.2M	.2M	.1M	.1M
							mg/Kg	mg/Kg	mg/Kg	mg/Kg
12	ORGANICS									
13	Acetone	1.26E-10	1.32E-11	NA	5.08E-10	5.51E-11	NA	NA	NA	NA
14	Acetonitrile	1.14E-07	1.20E-08	NA	7.89E-16	8.55E-17	NA	NA	NA	NA
15	Acrylonitrile	4.85E-08	5.09E-09	NA	2.86E-11	3.10E-12	5.46E-15	5.54E-15	1.09E-14	1.11E-14
16	Aldrin	1.77E-13	1.86E-14	7.89E-16	2.86E-11	3.10E-12	1.98E-10	2.01E-10	3.96E-10	4.01E-10
17	Aniline	6.41E-09	6.73E-10	1.77E-13	1.77E-13	1.91E-14	1.22E-12	1.24E-12	2.44E-12	2.48E-12
18	Atrazine	3.96E-11	4.16E-12	1.30E-11	1.30E-11	1.41E-12	9.01E-11	9.14E-11	1.80E-10	1.83E-10
19	Benzaldehyde	2.92E-09	3.07E-10	NA	6.33E-11	6.86E-12	4.38E-10	4.44E-10	8.76E-10	8.89E-10
20	Benzene	3.67E-11	3.85E-12	NA	6.38E-12	6.91E-13	4.41E-11	4.48E-11	8.82E-11	8.95E-11
21	Benzofuran	1.42E-08	1.49E-09	6.33E-11	6.38E-12	6.91E-13	4.41E-11	4.48E-11	8.82E-11	8.95E-11
22	Benzoic Acid	1.43E-09	1.50E-10	6.38E-12	6.38E-12	6.91E-13	4.41E-11	4.48E-11	8.82E-11	8.95E-11
23	Benzonitrile	3.12E-08	3.28E-09	5.93E-14	5.93E-14	6.42E-15	4.10E-13	4.16E-13	8.21E-13	8.33E-13
24	Benzothiazole	1.33E-11	1.40E-12	NA	3.50E-14	3.79E-15	2.42E-13	2.46E-13	4.84E-13	4.91E-13
25	Biphenyl	1.43E-08	1.50E-09	NA	2.86E-13	3.10E-14	1.98E-12	2.01E-12	3.96E-12	4.01E-12
26	Bis(2-ethylhexyl)phthalate	7.85E-12	8.24E-13	1.64E-14	1.64E-14	1.77E-15	1.13E-13	1.15E-13	2.26E-13	2.30E-13
27	Carbazole	6.41E-11	6.73E-12	NA	4.03E-14	4.37E-15	2.79E-13	2.83E-13	5.58E-13	5.66E-13
28	Carbon Tetrachloride	1.86E-10	1.95E-11	NA	2.03E-15	2.20E-16	1.40E-14	1.42E-14	2.81E-14	2.85E-14
29	4-Chloroaniline	3.67E-12	3.85E-13	4.03E-14	4.03E-14	4.37E-15	2.79E-13	2.83E-13	5.58E-13	5.66E-13
30	Chlorobenzene	8.82E-12	9.26E-13	2.03E-15	2.03E-15	2.20E-16	1.40E-14	1.42E-14	2.81E-14	2.85E-14
31	4-Chlorobiphenyl	9.04E-12	9.49E-13	1.45E-12	1.45E-12	1.56E-13	1.00E-11	1.01E-11	2.00E-11	2.03E-11
32	4,4'-Chlorobiphenyl	4.55E-13	4.78E-14	NA	1.27E-12	1.38E-13	8.79E-12	8.92E-12	1.76E-11	1.78E-11
33	Chloroethane	3.24E-10	3.40E-11	NA	NA	NA	NA	NA	NA	NA
34	Chloroform	1.58E-09	1.66E-10	NA	NA	NA	NA	NA	NA	NA
35	Dibenzofuran	2.85E-11	2.99E-11	1.27E-12	1.27E-12	1.38E-13	8.79E-12	8.92E-12	1.76E-11	1.78E-11
36	Dichlorobenzenes (total)	3.67E-11	3.85E-12	NA	NA	NA	NA	NA	NA	NA
37	1,4-Dichlorobenzene	2.32E-12	2.44E-13	NA	NA	NA	NA	NA	NA	NA
38	1,2-Dichloroethane	1.05E-10	1.10E-11	NA	NA	NA	NA	NA	NA	NA
39	1,2-Dichloroethane	3.28E-11	3.44E-12	1.46E-13	1.46E-13	1.58E-14	1.01E-12	1.03E-12	2.02E-12	2.05E-12
40	1,1-Dichloroethene	5.62E-11	5.90E-12	NA	NA	NA	NA	NA	NA	NA
41	1,2-Dichloroethene	4.86E-11	5.10E-12	NA	NA	NA	NA	NA	NA	NA
42	1,2-Dichloropropane	2.08E-11	2.18E-12	NA	NA	NA	NA	NA	NA	NA
43	Dieldrin	3.25E-13	3.41E-14	1.45E-15	1.45E-15	1.57E-16	1.00E-14	1.02E-14	2.01E-14	2.03E-14
44	Dimethyldisulfide	8.93E-11	9.38E-12	NA	NA	NA	NA	NA	NA	NA
45	Hexachlorobenzene	8.59E-10	9.02E-11	3.83E-12	3.83E-12	4.15E-13	2.65E-11	2.69E-11	5.30E-11	5.38E-11
46	Hydrazine	1.11E-06	1.17E-07	4.95E-09	4.95E-09	5.36E-10	3.42E-08	3.47E-08	6.85E-08	6.95E-08
47	Lindane	1.51E-13	1.59E-14	6.73E-16	6.73E-16	7.29E-17	4.66E-15	4.73E-15	9.32E-15	9.45E-15
48	Malathion	4.46E-13	4.68E-14	1.99E-15	1.99E-15	2.15E-16	1.38E-14	1.40E-14	2.75E-14	2.79E-14
49	Methyl chloride	4.36E-11	4.58E-12	NA	NA	NA	NA	NA	NA	NA
50	Methylene chloride	2.63E-09	2.76E-10	NA	NA	NA	NA	NA	NA	NA
51	Methyl ethyl ketone	5.51E-11	5.79E-12	2.46E-13	2.46E-13	2.66E-14	1.70E-12	1.72E-12	3.40E-12	3.45E-12
52	4-Methylphenol	5.00E-11	5.25E-12	2.23E-13	2.23E-13	2.41E-14	1.54E-12	1.56E-12	3.09E-12	3.13E-12
53	Monomethyl hydrazine	3.50E-07	3.67E-08	1.56E-09	1.56E-09	1.69E-10	1.08E-08	1.10E-08	2.16E-08	2.19E-08
54	Naphthalene	5.90E-12	6.20E-13	2.53E-14	2.53E-14	2.85E-15	1.82E-13	1.85E-13	3.64E-13	3.69E-13
55	Naphthalene carbonitrile	3.12E-08	3.28E-09	1.39E-10	1.39E-10	1.51E-11	9.63E-10	9.77E-10	1.93E-09	1.95E-09
56	n-Nitrosodimethylamine	3.56E-10	3.74E-11	1.59E-12	1.59E-12	1.72E-13	1.10E-11	1.11E-11	2.20E-11	2.23E-11
57	PAHs									
58	Acenaphthalene	1.42E-09	1.49E-10	6.33E-12	6.33E-12	6.86E-13	4.38E-11	4.44E-11	8.76E-11	8.89E-11
59	Acenaphthene	1.42E-09	1.49E-10	6.33E-12	6.33E-12	6.86E-13	4.38E-11	4.44E-11	8.76E-11	8.89E-11
60	Benzo(a)pyrene	2.89E-09	2.99E-10	1.27E-11	1.27E-11	1.38E-12	8.79E-11	8.92E-11	1.76E-10	1.78E-10

A	B	C	D	E	F	G	H	I	J	K
2			TABLE 1							
61	Chrysene		2.85E-10	2.99E-11	1.27E-12	1.38E-13	8.79E-12	8.92E-12	1.76E-11	1.78E-11
62	Dibenz(a,h)anthracene		2.85E-09	2.99E-10	1.27E-11	1.38E-12	8.79E-11	8.92E-11	1.76E-10	1.78E-10
63	Fluoranthene		2.85E-09	2.99E-10	1.27E-11	1.38E-12	8.79E-11	8.92E-11	1.76E-10	1.78E-10
64	Fluorene		2.85E-10	2.99E-11	1.27E-12	1.38E-13	8.79E-12	8.92E-12	1.76E-11	1.78E-11
65	Phenanthrene		1.11E-12	1.17E-13	4.95E-15	5.36E-16	3.42E-14	3.47E-14	6.85E-14	6.95E-14
66	Pyrene		5.70E-09	5.98E-10	2.54E-11	2.75E-12	1.76E-10	1.78E-10	3.52E-10	3.57E-10
67	Parathion		7.06E-13	7.41E-14	3.15E-15	3.41E-16	2.18E-14	2.21E-14	4.36E-14	4.42E-14
68	Pentachlorobenzene		3.50E-10	3.67E-11	1.56E-12	1.69E-13	1.08E-11	1.10E-11	2.16E-11	2.19E-11
69	Phenol		5.60E-12	5.88E-13	2.50E-14	2.70E-15	1.73E-13	1.75E-13	3.46E-13	3.51E-13
70	Pyridine		3.12E-08	3.28E-09	NA	NA	NA	NA	NA	NA
71	Quinoline		3.21E-10	3.37E-11	1.43E-12	1.55E-13	9.90E-12	1.00E-11	1.98E-11	2.01E-11
72	Tetrachlorobenzene		1.72E-10	1.81E-11	7.67E-13	8.31E-14	5.31E-12	5.38E-12	1.06E-11	1.08E-11
73	Tetrachloroethene		6.01E-12	6.31E-13	NA	NA	NA	NA	NA	NA
74	Toluene		9.58E-11	1.01E-11	NA	NA	NA	NA	NA	NA
75	Trichlorobenzene		8.71E-11	9.15E-12	3.88E-13	4.21E-14	2.69E-12	2.73E-12	5.37E-12	5.45E-12
76	Trichloroethene		6.41E-11	6.73E-12	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		1.38E-06	1.45E-07	6.15E-09	6.67E-10	4.26E-08	4.32E-08	8.51E-08	8.64E-08
78	Vapona		3.79E-12	2.93E-13	1.24E-14	1.35E-15	8.61E-14	8.73E-14	1.72E-13	1.75E-13
79	Vinyl acetate		3.96E-11	4.16E-12	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		3.67E-11	3.85E-12	NA	NA	NA	NA	NA	NA
81	Xylenes (total)		6.84E-12	7.18E-13	NA	NA	NA	NA	NA	NA
82										
83	INORGANICS									
84	Arsenic		3.76E-08	3.95E-09	1.68E-10	1.82E-11	1.16E-09	1.18E-09	2.32E-09	2.35E-09
85	Cadmium		2.18E-10	2.29E-11	9.72E-13	1.05E-13	6.73E-12	6.82E-12	1.35E-11	1.36E-11
86	Chromium (III)		9.66E-10	1.01E-10	NA	NA	NA	NA	NA	NA
87	Chromium (VI)		3.40E-11	3.57E-12	NA	NA	NA	NA	NA	NA
88	Copper		1.43E-09	1.50E-10	NA	NA	NA	NA	NA	NA
89	Iron		3.47E-05	3.64E-06	NA	NA	NA	NA	NA	NA
90	Lead		1.41E-09	1.48E-10	6.29E-12	6.81E-13	4.35E-11	4.41E-11	8.70E-11	8.83E-11
91	Mercury		1.41E-09	1.48E-10	6.29E-12	6.81E-13	4.35E-11	4.41E-11	8.70E-11	8.83E-11
92	Selenium		4.27E-09	4.48E-10	NA	NA	NA	NA	NA	NA
93	Silver		1.95E-11	2.03E-12	NA	NA	NA	NA	NA	NA
94	Zinc		1.12E-08	1.18E-09	NA	NA	NA	NA	NA	NA
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										

2 yrs ACCUMULATION TIME AT
 0.2 M SOIL DEPTH OF MIXING SD
 0.1 M SOIL DEPTH OF MIXING SD
 1.43E+03 Kg/M3 SOIL BULK DENSITY BD
 1.00E+03 mg/g
 3.15E+07 sec/yr

Dilution Factor
 1.05E-01 INHALATION DFI
 Deposition Factor DF
 4.83E-04 DRY DDF
 4.46E-03 DRY/WET TDF

CO =

D*AT*1000

 SD*BD

AC = ER * DFI
 D = ER * x DF

A	B	C	T	U	V	W	X	Y	Z	AA	
2			TABLE 2								
3			ADULT TOTAL EXPOSURE - AVERAGE								
4											
5											
6											
7											
8											
9											
10											
11											
12	ORGANICS										
13	Acetone		1.29E-15	NA	NA	NA	NA	NA	NA	1.29E-15	
14	Acetonitrile		1.17E-12	0.00E+00	0.00E+00	0.00E+00	6.19E-15	0.00E+00	1.29E-14	1.19E-12	
15	Acrylonitrile		4.98E-13	NA	NA	NA	NA	NA	NA	4.98E-13	
16	Aldrin		1.82E-18	0.00E+00	0.00E+00	0.00E+00	9.62E-21	0.00E+00	2.00E-20	1.85E-18	
17	Aniline		6.59E-14	0.00E+00	0.00E+00	0.00E+00	3.48E-16	0.00E+00	7.24E-16	6.69E-14	
18	Atrazine		4.07E-16	0.00E+00	0.00E+00	0.00E+00	2.15E-18	0.00E+00	4.48E-18	4.13E-16	
19	Benzaldehyde		3.00E-14	0.00E+00	0.00E+00	0.00E+00	1.59E-16	0.00E+00	3.30E-16	3.05E-14	
20	Benzene		3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16	
21	Benzofuran		1.46E-13	0.00E+00	0.00E+00	0.00E+00	7.72E-16	0.00E+00	1.60E-15	1.48E-13	
22	Benzoic Acid		1.47E-14	0.00E+00	0.00E+00	0.00E+00	7.77E-17	0.00E+00	1.62E-16	1.49E-14	
23	Benzonitrile		3.21E-13	0.00E+00	0.00E+00	0.00E+00	1.70E-15	0.00E+00	3.53E-15	3.26E-13	
24	Benzothiazole		1.37E-16	0.00E+00	0.00E+00	0.00E+00	7.23E-19	0.00E+00	1.50E-18	1.39E-16	
25	Biphenyl		1.47E-13	NA	NA	NA	NA	NA	NA	1.47E-13	
26	Bis(2-ethylhexyl)phthalate		8.07E-17	0.00E+00	0.00E+00	0.00E+00	4.27E-19	0.00E+00	8.87E-19	8.20E-17	
27	Carbazole		6.59E-16	0.00E+00	0.00E+00	0.00E+00	3.48E-18	0.00E+00	7.24E-18	6.69E-16	
28	Carbon Tetrachloride		1.91E-15	NA	NA	NA	NA	NA	NA	1.91E-15	
29	4-Chloroaniline		3.77E-17	0.00E+00	0.00E+00	0.00E+00	1.99E-19	0.00E+00	4.15E-19	3.83E-17	
30	Chlorobenzene		9.06E-17	NA	NA	NA	NA	NA	NA	9.06E-17	
31	4-Chlorobiphenyl		9.29E-17	0.00E+00	0.00E+00	0.00E+00	4.91E-19	0.00E+00	1.02E-18	9.44E-17	
32	4,4'-Chlorobiphenyl		4.67E-18	0.00E+00	0.00E+00	0.00E+00	2.47E-20	0.00E+00	5.14E-20	4.75E-18	
33	Chloroethane		3.33E-15	0.00E+00	0.00E+00	0.00E+00	1.76E-17	0.00E+00	3.66E-17	3.38E-15	
34	Chloroform		1.62E-14	NA	NA	NA	NA	NA	NA	1.62E-14	
35	Dibenzofuran		2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.55E-17	0.00E+00	3.22E-17	2.98E-15	
36	Dichlorobenzenes (total)		3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16	
37	1,4-Dichlorobenzene		2.38E-17	NA	NA	NA	NA	NA	NA	2.38E-17	
38	1,1-Dichloroethane		1.08E-15	NA	NA	NA	NA	NA	NA	1.08E-15	
39	1,2-Dichloroethane		3.37E-16	0.00E+00	0.00E+00	0.00E+00	1.78E-18	0.00E+00	3.71E-18	3.42E-16	
40	1,1-Dichloroethene		5.77E-16	NA	NA	NA	NA	NA	NA	5.77E-16	
41	1,2-Dichloroethene		4.99E-16	NA	NA	NA	NA	NA	NA	4.99E-16	
42	1,2-Dichloropropane		2.14E-16	NA	NA	NA	NA	NA	NA	2.14E-16	
43	Dieldrin		3.34E-18	0.00E+00	0.00E+00	0.00E+00	1.77E-20	0.00E+00	3.67E-20	3.39E-18	
44	Dimethyldisulfide		9.17E-16	NA	NA	NA	NA	NA	NA	9.17E-16	
45	Hexachlorobenzene		8.83E-15	0.00E+00	0.00E+00	0.00E+00	4.67E-17	0.00E+00	9.71E-17	8.97E-15	
46	Hydrazine		1.14E-11	0.00E+00	0.00E+00	0.00E+00	6.03E-14	0.00E+00	1.25E-13	1.16E-11	
47	Lindane		1.55E-18	0.00E+00	0.00E+00	0.00E+00	8.20E-21	0.00E+00	1.71E-20	1.58E-18	
48	Malathion		4.58E-18	0.00E+00	0.00E+00	0.00E+00	2.42E-20	0.00E+00	5.04E-20	4.66E-18	
49	Methyl chloride		4.48E-16	NA	NA	NA	NA	NA	NA	4.48E-16	
50	Methylene chloride		2.70E-14	NA	NA	NA	NA	NA	NA	2.70E-14	
51	Methyl ethyl ketone		5.66E-16	0.00E+00	0.00E+00	0.00E+00	2.99E-18	0.00E+00	6.23E-18	5.75E-16	
52	4-Methylphenol		5.14E-16	0.00E+00	0.00E+00	0.00E+00	2.72E-18	0.00E+00	5.65E-18	5.22E-16	
53	Monomethyl hydrazine		3.60E-12	0.00E+00	0.00E+00	0.00E+00	1.90E-14	0.00E+00	3.96E-14	3.65E-12	
54	Naphthalene		6.06E-17	0.00E+00	0.00E+00	0.00E+00	3.21E-19	0.00E+00	6.67E-19	6.16E-17	
55	Naphthalene carbonitrile		3.21E-13	0.00E+00	0.00E+00	0.00E+00	1.70E-15	0.00E+00	3.53E-15	3.26E-13	
56	n-Nitrosodimethylamine		3.66E-15	0.00E+00	0.00E+00	0.00E+00	1.93E-17	0.00E+00	4.02E-17	3.72E-15	
57	PAHS										
58	Acenaphthalene		1.46E-14	0.00E+00	0.00E+00	0.00E+00	7.72E-17	0.00E+00	1.60E-16	1.48E-14	
59	Acenaphthene		1.46E-14	0.00E+00	0.00E+00	0.00E+00	7.72E-17	0.00E+00	1.60E-16	1.48E-14	
60	Benzo(a)pyrene		2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.55E-16	0.00E+00	3.22E-16	2.98E-14	

A	B	C	T	U	V	W	X	Y	Z	AA
			TABLE 2							
61		Chrysene	2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.55E-17	0.00E+00	3.22E-17	2.98E-15
62		Dibenzok(a,h)anthracene	2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.55E-16	0.00E+00	3.22E-16	2.98E-14
63		Fluoranthene	2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.55E-16	NA	3.22E-16	2.98E-14
64		Fluorene	2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.55E-17	0.00E+00	3.22E-17	2.98E-15
65		Phenanthrene	1.14E-17	0.00E+00	0.00E+00	0.00E+00	6.03E-20	0.00E+00	1.25E-19	1.16E-17
66		Pyrene	5.86E-14	0.00E+00	0.00E+00	0.00E+00	3.10E-16	0.00E+00	6.44E-16	5.95E-14
67		Parathion	7.25E-18	0.00E+00	0.00E+00	0.00E+00	3.84E-20	0.00E+00	7.98E-20	7.37E-18
68		Pentachlorobenzene	3.60E-15	0.00E+00	0.00E+00	0.00E+00	1.90E-17	NA	3.96E-17	3.65E-15
69		Phenol	5.75E-17	0.00E+00	0.00E+00	0.00E+00	3.04E-19	NA	6.33E-19	5.85E-17
70		Pyridine	3.21E-13	NA	NA	NA	NA	NA	NA	3.21E-13
71		Quinoline	3.30E-15	0.00E+00	0.00E+00	0.00E+00	1.74E-17	0.00E+00	3.63E-17	3.35E-15
72		Tetrachlorobenzene	1.77E-15	0.00E+00	0.00E+00	0.00E+00	9.35E-18	NA	1.94E-17	1.80E-15
73		Tetrachloroethene	6.17E-17	NA	NA	NA	NA	NA	NA	6.17E-17
74		Toluene	9.84E-16	NA	NA	NA	NA	NA	NA	9.84E-16
75		Trichlorobenzene	8.95E-16	0.00E+00	0.00E+00	0.00E+00	4.73E-18	0.00E+00	9.84E-18	9.09E-16
76		Trichloroethene	6.59E-16	NA	NA	NA	NA	NA	NA	6.59E-16
77		Unsym. dimethyl hydrazine	1.42E-11	0.00E+00	0.00E+00	0.00E+00	7.50E-14	0.00E+00	1.56E-13	1.44E-11
78		Vapona	2.87E-17	0.00E+00	0.00E+00	0.00E+00	1.52E-19	0.00E+00	3.15E-19	2.91E-17
79		Vinyl acetate	4.07E-16	NA	NA	NA	NA	NA	NA	4.07E-16
80		Vinyl chloride	3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16
81		Xylenes (total)	7.03E-17	NA	NA	NA	NA	NA	NA	7.03E-17
82										
83		INORGANICS								
84		Arsenic	3.86E-13	0.00E+00	0.00E+00	0.00E+00	2.04E-15	0.00E+00	4.25E-16	3.89E-13
85		Cadmium	2.24E-15	0.00E+00	0.00E+00	0.00E+00	1.18E-17	NA	2.46E-18	2.25E-15
86		Chromium (III)	9.92E-15	NA	NA	NA	NA	NA	NA	9.92E-15
87		Chromium (VI)	3.49E-16	NA	NA	NA	NA	NA	NA	3.49E-16
88		Copper	1.47E-14	NA	NA	NA	NA	0.00E+00	NA	1.47E-14
89		Iron	3.57E-10	NA	NA	NA	NA	NA	NA	3.57E-10
90		Lead	1.45E-14	NA	NA	NA	NA	NA	NA	1.45E-14
91		Mercury	1.45E-14	0.00E+00	0.00E+00	0.00E+00	7.66E-17	NA	1.59E-17	1.46E-14
92		Selenium	4.39E-14	NA	NA	NA	NA	NA	NA	4.39E-14
93		Silver	2.00E-16	NA	NA	NA	NA	NA	NA	2.00E-16
94		Zinc	1.15E-13	NA	NA	NA	NA	0.00E+00	NA	1.15E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										

br 10 M3/day
 bw 70 Kg
 ef 250 days/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf
 D*AT*1000

 SD*BD
 AC = ER * DFI
 D = ER * X DF

ROCKY MTN ARSENAL - FARMER SCENARIO - HYDRAZINE WASTESTREAM 18-Jun-91

117	B	C	8J	BK	BL	BM
118	BASE CASE	TABLE 15				
177	INORGANICS					
179	Arsenic	1.56E-09	2.01E-14	1.58E-09	2.04E-14	
180	Cadmium	9.05E-12	1.17E-16	9.18E-12	1.18E-16	
181	Mercury	5.85E-11	7.55E-16	5.94E-11	7.66E-16	

0.2 Soil/dust ingestion rate (g/day)
 15.5 Body weight (kg)
 365 days/yr
 365000 g/kg*day/yr

EDI = Csoil*SIR*EF/BW/CF

193

117 118 119 120 121 122 123 124 125 126 127 128 129	B BASE CASE	C TABLE 16 SOIL INGESTION ADULT	18-Jun-91 15:15:33				18-Jun-91 15:15:33			
			AVERAGE		MAXIMUM		AVERAGE		MAXIMUM	
			C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day	C soil CALCULATED CONC IN SOIL .1M mg/Kg	EDI ESTIMATED DAILY INTAKE mg/Kg/day
130	ORGANICS									
131	Acetonitrile		4.73E-09	6.76E-15	4.80E-09	6.86E-15	4.80E-09	6.86E-15	4.80E-09	6.86E-15
132	Aldrin		7.35E-15	1.05E-20	7.45E-15	1.06E-20	7.45E-15	1.06E-20	7.45E-15	1.06E-20
133	Aniline		2.66E-10	3.80E-16	2.70E-10	3.86E-16	2.70E-10	3.86E-16	2.70E-10	3.86E-16
134	Atrazine		1.64E-12	2.35E-18	1.67E-12	2.38E-18	1.67E-12	2.38E-18	1.67E-12	2.38E-18
135	Benzaldehyde		1.21E-10	1.73E-16	1.23E-10	1.76E-16	1.23E-10	1.76E-16	1.23E-10	1.76E-16
136	Benzofuran		5.89E-10	8.42E-16	5.98E-10	8.54E-16	5.98E-10	8.54E-16	5.98E-10	8.54E-16
137	Benzoic Acid		5.94E-11	8.48E-17	6.02E-11	8.60E-17	6.02E-11	8.60E-17	6.02E-11	8.60E-17
138	Benzonitrile		1.29E-09	1.85E-15	1.31E-09	1.88E-15	1.31E-09	1.88E-15	1.31E-09	1.88E-15
139	Benzothiazole		5.52E-13	7.89E-19	5.60E-13	8.00E-19	5.60E-13	8.00E-19	5.60E-13	8.00E-19
140	Bis(2-ethylhexyl)phthalate		3.26E-13	4.65E-19	3.31E-13	4.72E-19	3.31E-13	4.72E-19	3.31E-13	4.72E-19
141	Carbazole		2.65E-12	3.80E-18	2.70E-12	3.86E-18	2.70E-12	3.86E-18	2.70E-12	3.86E-18
142	4-Chloroaniline		1.52E-13	2.18E-19	1.55E-13	2.21E-19	1.55E-13	2.21E-19	1.55E-13	2.21E-19
143	4-Chlorobiphenyl		3.75E-13	5.36E-19	3.81E-13	5.44E-19	3.81E-13	5.44E-19	3.81E-13	5.44E-19
144	4,4-Chlorobiphenyl		1.89E-14	2.70E-20	1.92E-14	2.74E-20	1.92E-14	2.74E-20	1.92E-14	2.74E-20
145	Chloroethane		1.34E-11	1.92E-17	1.36E-11	1.95E-17	1.36E-11	1.95E-17	1.36E-11	1.95E-17
146	Dibenzofuran		1.8E-11	1.69E-17	1.80E-11	1.71E-17	1.80E-11	1.71E-17	1.80E-11	1.71E-17
147	1,2-Dichloroethane		1.36E-12	1.94E-18	1.38E-12	1.97E-18	1.38E-12	1.97E-18	1.38E-12	1.97E-18
148	Dieldrin		1.35E-14	1.93E-20	1.37E-14	1.95E-20	1.37E-14	1.95E-20	1.37E-14	1.95E-20
149	Hexachlorobenzene		3.57E-11	5.09E-17	3.62E-11	5.17E-17	3.62E-11	5.17E-17	3.62E-11	5.17E-17
150	Hydrazine		4.61E-08	6.58E-14	4.67E-08	6.68E-14	4.67E-08	6.68E-14	4.67E-08	6.68E-14
151	Lindane		6.27E-15	8.95E-21	6.36E-15	9.08E-21	6.36E-15	9.08E-21	6.36E-15	9.08E-21
152	Malathion		1.85E-14	2.64E-20	1.88E-14	2.68E-20	1.88E-14	2.68E-20	1.88E-14	2.68E-20
153	Methyl ethyl ketone		2.29E-12	3.27E-18	2.32E-12	3.31E-18	2.32E-12	3.31E-18	2.32E-12	3.31E-18
154	4-Methylphenol		2.08E-12	2.96E-18	2.11E-12	3.01E-18	2.11E-12	3.01E-18	2.11E-12	3.01E-18
155	Monomethyl hydrazine		1.45E-08	2.08E-14	1.47E-08	2.11E-14	1.47E-08	2.11E-14	1.47E-08	2.11E-14
156	Naphthalene		2.45E-13	3.50E-19	2.48E-13	3.55E-19	2.48E-13	3.55E-19	2.48E-13	3.55E-19
157	Naphthalene carbonitrile		1.29E-09	1.85E-15	1.31E-09	1.88E-15	1.31E-09	1.88E-15	1.31E-09	1.88E-15
158	n-Nitrosodimethylamine		1.48E-11	2.11E-17	1.50E-11	2.14E-17	1.50E-11	2.14E-17	1.50E-11	2.14E-17
159	PAHS									
160	Acenaphthalene		5.89E-11	8.42E-17	5.98E-11	8.54E-17	5.98E-11	8.54E-17	5.98E-11	8.54E-17
161	Acenaphthene		5.89E-11	8.42E-17	5.98E-11	8.54E-17	5.98E-11	8.54E-17	5.98E-11	8.54E-17
162	Benzo(a)pyrene		1.18E-10	1.69E-16	1.20E-10	1.71E-16	1.20E-10	1.71E-16	1.20E-10	1.71E-16
163	Chrysene		1.18E-11	1.69E-17	1.20E-11	1.71E-17	1.20E-11	1.71E-17	1.20E-11	1.71E-17
164	Dibenzo(a,h)anthracene		1.18E-10	1.69E-16	1.20E-10	1.71E-16	1.20E-10	1.71E-16	1.20E-10	1.71E-16
165	Fluoranthene		1.18E-10	1.69E-16	1.20E-10	1.71E-16	1.20E-10	1.71E-16	1.20E-10	1.71E-16
166	Fluorene		1.18E-11	1.69E-17	1.20E-11	1.71E-17	1.20E-11	1.71E-17	1.20E-11	1.71E-17
167	Phenanthrene		4.61E-14	6.58E-20	4.67E-14	6.68E-20	4.67E-14	6.68E-20	4.67E-14	6.68E-20
168	Pyrene		2.37E-10	3.38E-16	2.40E-10	3.43E-16	2.40E-10	3.43E-16	2.40E-10	3.43E-16
169	Parathion		2.93E-14	4.19E-20	2.97E-14	4.25E-20	2.97E-14	4.25E-20	2.97E-14	4.25E-20
170	Pentachlorobenzene		1.45E-11	2.08E-17	1.47E-11	2.11E-17	1.47E-11	2.11E-17	1.47E-11	2.11E-17
171	Phenol		2.32E-13	3.32E-19	2.36E-13	3.37E-19	2.36E-13	3.37E-19	2.36E-13	3.37E-19
172	Quinoline		1.33E-11	1.90E-17	1.35E-11	1.93E-17	1.35E-11	1.93E-17	1.35E-11	1.93E-17
173	Tetrachlorobenzene		7.14E-12	1.02E-17	7.24E-12	1.03E-17	7.24E-12	1.03E-17	7.24E-12	1.03E-17
174	Trichlorobenzene		3.61E-12	5.16E-18	3.67E-12	5.24E-18	3.67E-12	5.24E-18	3.67E-12	5.24E-18
175	Unsym. dimethyl hydrazine		5.73E-08	8.18E-14	5.81E-08	8.30E-14	5.81E-08	8.30E-14	5.81E-08	8.30E-14
176	Vapona		1.16E-13	1.65E-19	1.17E-13	1.68E-19	1.17E-13	1.68E-19	1.17E-13	1.68E-19

B	C	TABLE 5				M	N	O
		BASE CASE	DERMAL EXPOSURE ADULT	AF	ED1			
			C soil	MAXIMUM	AVERAGE			
			AVERAGE	CONC IN	ESTIMATED			
			CONC IN	SOIL	DAILY			
			SOIL	-2M	INTAKE			
			mg/kg	mg/kg	mg/kg/day			
284								
285								
286								
287								
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292								
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ORGANICS

Acetonitrile
Aldrin
Aniline
Atrazine
Benzaldehyde
Benzofuran
Benzoic Acid
Benzonitrile
Benzothiazole
Bis(2-ethylhexyl)phthalate
Carbazole
4-Chloroaniline
4-Chlorobiphenyl
4,4-Chlorobiphenyl
Chloroethane
Dibenzofuran
1,2-Dichloroethane
Dieldrin
Hexachlorobenzene
Hydrazine
Lindane
Malathion
Methyl ethyl ketone
4-Methylphenol
Monomethyl hydrazine
Naphthalene
Naphthalene carbonitrile
n-Nitrosodimethylamine

PAHS

Acenaphthalene
Acenaphthene
Benzo(a)pyrene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Phenanthrene
Pyrene
Parathion
Pentachlorobenzene
Phenol
Quinoline
Tetrachlorobenzene
Trichlorobenzene
Unsym. dimethyl hydrazine
Vapona

284	B	C				
285	BASE CASE					
344	INORGANICS					
345	Arsenic					
346	Cadmium					
347	Mercury					
348						
349						
350						
351						
352						
353						
354						
355						
356						
357						

TABLE 5			K	L	M	N	O
1.16E-09	1.18E-09	1.00E-02	4.25E-16	4.31E-16			
6.73E-12	6.82E-12	1.00E-02	2.46E-18	2.50E-18			
4.35E-11	4.41E-11	1.00E-02	1.59E-17	1.62E-17			

195 Number of exposure events per year (events/yr) NE
 3200 Exposed surface area (cm2/event) ESA
 1.5 Skin adherence factor for soil (mg/cm2) SAF
 1 Soil matrix factor SMF
 70 Body weight (Kg) BW
 365 Days/yr DAYR
 1000000 mg/Kg mgKg

$$EDI = C_{soil} * AF * SAF * ESA * NE * SMF / BW / mgKg / DAYR$$

ROCKY MOUNTAIN ARSENAL - 18-JUN-91 - HYDRAZINE WASTE STREAM

A B C D E F G

TABLE 6
CARCINOGENIC SLOPE FACTORS ((mg/kg-day)⁻¹)

Inhalation
Slope
Factor

Oral
Slope
Factor

Dermal
Slope
Factor

101 WORKER

104 BASE CASE

108 ORGANICS

109 Acrylonitrile

110 Aldrin

111 Aniline

112 Benzene

113 Bis(2-ethylhexyl)phthalate

114 Carbazole

115 Carbon Tetrachloride

116 Chloroform

117 1,4-Dichlorobenzene

118 1,1-Dichloroethane

119 1,2-Dichloroethane

120 1,1-Dichloroethene

121 1,2-Dichloropropane

122 Dieldrin

123 Hexachlorobenzene

124 Hydrazine

125 Lindane

126 Methyl chloride

127 Methylene chloride

128 4-Methylphenol

129 Monomethyl hydrazine

130 n-Nitrosodimethylamine

131 PAHs

132 Benzo(a)pyrene

133 Chrysene

134 Dibenz(a,h)anthracene

135 Parathion

136 Quinoline

137 Tetrachloroethene

138 Trichloroethene

139 Vapona

140 Vinyl chloride

141

142 INORGANICS

143 Arsenic

144 Cadmium

145 Chromium (VI)

146

147 Total

148

149

150

151

152

153

2.40E-01

1.70E+01

5.70E-03

2.90E-02

1.40E-02

2.00E-02

1.30E-01

8.10E-02

2.40E-02

9.10E-02

1.20E+00

6.80E-02

1.60E+01

1.60E+00

1.71E+01

1.30E+00

6.30E-03

1.40E-02

1.10E+00

5.10E+01

6.10E+00

6.10E+00

1.20E+01

3.30E-03

1.10E-02

2.90E-01

2.95E-01

1.50E+01

6.10E+00

4.10E+01

5.40E-01

1.70E+01

5.70E-03

2.90E-02

1.40E-02

2.00E-02

1.30E-01

6.10E-03

2.40E-02

9.10E-02

6.00E-01

6.80E-02

1.60E+01

1.60E+00

3.00E+00

1.30E+00

7.50E-03

1.10E+00

5.10E+01

1.15E+01

1.15E+01

1.15E+01

1.20E+01

5.10E-02

1.10E-02

2.90E-01

2.30E+00

1.75E+00

NC

NC

NC

3.40E+01

1.14E-02

NC

2.80E-02

4.00E-02

NC

NC

1.82E-01

NC

NC

3.20E+01

3.20E+00

6.00E+00

2.60E+00

NC

NC

2.20E+00

1.02E+02

2.30E+01

2.30E+01

2.30E+01

2.40E+01

NC

NC

5.80E-01

NC

3.50E+01

NC

NC

AED Adult Exposure Duration

CED Child Exposure Duration

CID Child Inhalation Duration

IED Infant Exposure Duration

IID Infant Inhalation Duration

64

5

1

1

1

TABLE 7
WORKER CARCINOGENIC RISK

	WORKER BASE CASE	INHALATION CARC. RISK	SOIL/DUST INGESTION CARC. RISK	DERMAL EXPOSURE CARC. RISK	TOTAL LIFETIME RISK
102					
103					
104					
105					
106					
107					
108	ORGANICS				
109	Acrylonitrile	3.42E-15	NA	NA	3.42E-15
110	Aldrin	8.83E-19	7.01E-20	2.91E-19	1.24E-18
111	Aniline	1.07E-17	8.51E-19	3.54E-18	1.51E-17
112	Benzene	3.12E-19	NA	NA	3.12E-19
113	Bis(2-ethylhexyl)phthalate	3.23E-20	2.56E-21	1.06E-20	4.55E-20
114	Carbazole	3.76E-19	2.99E-20	1.24E-19	5.30E-19
115	Carbon Tetrachloride	7.10E-18	NA	NA	7.10E-18
116	Chloroform	3.76E-17	NA	NA	3.76E-17
117	1,4-Dichlorobenzene	1.63E-20	NA	NA	1.63E-20
118	1,1-Dichloroethane	NE	NE	NE	NE
119	1,2-Dichloroethane	8.76E-19	6.95E-20	2.89E-19	1.23E-18
120	1,1-Dichloroethene	1.98E-17	NA	NA	1.98E-17
121	1,2-Dichloropropane	4.15E-19	NA	NA	4.15E-19
122	Dieldrin	1.53E-18	1.21E-19	5.04E-19	2.15E-18
123	Hexachlorobenzene	4.03E-16	3.20E-17	1.33E-16	5.69E-16
124	Hydrazine	5.17E-12	7.75E-14	3.23E-13	5.97E-12
125	Lindane	5.76E-20	4.57E-21	1.90E-20	8.12E-20
126	Methyl chloride	8.06E-20	NA	NA	8.06E-20
127	Methylene chloride	1.08E-17	NA	NA	1.08E-17
128	4-Methylphenol	NE	NE	NE	NE
129	Monomethyl hydrazine	1.13E-13	8.97E-15	3.73E-14	1.59E-13
130	n-Nitrosodimethylamine	5.33E-15	4.23E-16	1.76E-15	7.51E-15
131	PAHS				
132	Benzo(a)pyrene	5.10E-15	7.63E-16	3.18E-15	9.04E-15
133	Chrysene	5.10E-16	7.63E-17	3.18E-16	9.04E-16
134	Dibenzo(a,h)anthracene	5.10E-15	7.63E-16	3.18E-15	9.04E-15
135	Parathion	NE	NE	NE	NE
136	Quinoline	1.13E-15	8.97E-17	3.73E-16	1.59E-15
137	Tetrachloroethene	5.82E-21	NA	5.82E-21	5.82E-21
138	Trichloroethene	2.07E-19	NA	NA	2.07E-19
139	Vapona	2.38E-19	1.88E-20	7.84E-20	3.35E-19
140	Vinyl chloride	3.18E-18	NA	NA	3.18E-18
141					
142	INORGANICS				
143	Arsenic	1.66E-13	1.53E-15	6.37E-15	1.73E-13
144	Cadmium	3.90E-16	NA	NA	3.90E-16
145	Chromium (VI)	4.09E-16	NA	NA	4.09E-16
146					
147	Total	5.87E-12	9.02E-14	3.75E-13	6.34E-12
148					
149					
150					
		30 YEARS - TOTAL WORKER EXPOSURE DURATION			
		2 YEARS - INHALATION EXPOSURE DURATION			

A	B	C	AD TABLE 3 ADULT TOTAL EXPOSURE - MAXIMUM	AE	AF	AG	AH	AI	AJ	AK
2	3	4	5	6	7	8	9	10	11	12
BASE CASE										
18-Jun-91 15:34:28 WORKER	INHALATION EXPOSURE (mg/Kg/day)	VEGETABLE EXPOSURE (mg/Kg/day)	MILK EXPOSURE (mg/Kg/day)	BEEF EXPOSURE (mg/Kg/day)	SOIL/DUST EXPOSURE (mg/Kg/day)	FISH CONSUMPTION (mg/Kg/day)	DERMAL EXPOSURE (mg/Kg/day)	TOTAL (mg/Kg/day)		
13	1.29E-15	NA	NA	NA	NA	0.00E+00	1.31E-14	1.29E-15		
14	1.17E-12	0.00E+00	0.00E+00	0.00E+00	6.28E-15	0.00E+00	NA	1.19E-12		
15	4.98E-13	NA	NA	NA	NA	NA	NA	4.98E-13		
16	1.82E-18	0.00E+00	0.00E+00	0.00E+00	9.76E-21	0.00E+00	2.03E-20	1.85E-18		
17	6.59E-14	0.00E+00	0.00E+00	0.00E+00	3.53E-16	0.00E+00	7.35E-16	6.69E-14		
18	4.07E-16	0.00E+00	0.00E+00	0.00E+00	2.18E-18	0.00E+00	4.54E-18	4.14E-16		
19	3.00E-14	0.00E+00	0.00E+00	0.00E+00	1.61E-16	0.00E+00	3.35E-16	3.05E-14		
20	3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16		
21	1.46E-13	0.00E+00	0.00E+00	0.00E+00	7.83E-16	0.00E+00	1.63E-15	1.48E-13		
22	1.47E-14	0.00E+00	0.00E+00	0.00E+00	7.88E-17	0.00E+00	1.64E-16	1.49E-14		
23	3.21E-13	0.00E+00	0.00E+00	0.00E+00	1.72E-15	0.00E+00	3.58E-15	3.26E-13		
24	1.37E-16	0.00E+00	0.00E+00	0.00E+00	7.33E-19	0.00E+00	1.52E-18	1.39E-16		
25	1.47E-13	NA	NA	NA	NA	NA	NA	1.47E-13		
26	8.07E-17	0.00E+00	0.00E+00	0.00E+00	4.33E-19	0.00E+00	9.00E-19	8.20E-17		
27	6.59E-16	0.00E+00	0.00E+00	0.00E+00	3.53E-18	0.00E+00	7.35E-18	6.69E-16		
28	1.91E-15	NA	NA	NA	NA	NA	NA	1.91E-15		
29	3.77E-17	0.00E+00	0.00E+00	0.00E+00	2.02E-19	0.00E+00	4.21E-19	3.83E-17		
30	9.06E-17	NA	NA	NA	NA	NA	NA	9.06E-17		
31	9.29E-17	0.00E+00	0.00E+00	0.00E+00	4.98E-19	0.00E+00	1.04E-18	9.44E-17		
32	4.67E-18	0.00E+00	0.00E+00	0.00E+00	2.51E-20	0.00E+00	5.22E-20	4.73E-18		
33	3.33E-15	0.00E+00	0.00E+00	0.00E+00	1.79E-17	0.00E+00	3.71E-17	3.38E-15		
34	1.62E-14	NA	NA	NA	NA	NA	NA	1.62E-14		
35	2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.57E-17	0.00E+00	3.27E-17	2.98E-15		
36	3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16		
37	2.38E-17	NA	NA	NA	NA	NA	NA	2.38E-17		
38	1.08E-15	NA	NA	NA	NA	NA	NA	1.08E-15		
39	3.37E-16	0.00E+00	0.00E+00	0.00E+00	1.81E-18	0.00E+00	3.76E-18	3.43E-16		
40	5.77E-16	NA	NA	NA	NA	NA	NA	5.77E-16		
41	4.99E-16	NA	NA	NA	NA	NA	NA	4.99E-16		
42	2.14E-16	NA	NA	NA	NA	NA	NA	2.14E-16		
43	3.34E-18	0.00E+00	0.00E+00	0.00E+00	1.79E-20	0.00E+00	3.73E-20	3.39E-18		
44	9.17E-16	NA	NA	NA	NA	NA	NA	9.17E-16		
45	8.83E-15	0.00E+00	0.00E+00	0.00E+00	4.74E-17	0.00E+00	9.85E-17	8.97E-15		
46	1.14E-11	0.00E+00	0.00E+00	0.00E+00	6.12E-14	0.00E+00	1.27E-13	1.16E-11		
47	1.55E-18	0.00E+00	0.00E+00	0.00E+00	8.32E-21	0.00E+00	1.73E-20	1.58E-18		
48	4.58E-18	0.00E+00	0.00E+00	0.00E+00	2.46E-20	0.00E+00	5.11E-20	4.66E-18		
49	4.48E-16	NA	NA	NA	NA	NA	NA	4.48E-16		
50	2.70E-14	NA	NA	NA	NA	NA	NA	2.70E-14		
51	5.66E-16	0.00E+00	0.00E+00	0.00E+00	3.04E-18	0.00E+00	6.32E-18	5.75E-16		
52	5.14E-16	0.00E+00	0.00E+00	0.00E+00	2.76E-18	0.00E+00	5.73E-18	5.22E-16		
53	3.60E-12	0.00E+00	0.00E+00	0.00E+00	1.93E-14	0.00E+00	4.01E-14	3.66E-12		
54	6.06E-17	0.00E+00	0.00E+00	0.00E+00	3.25E-19	0.00E+00	6.76E-19	6.16E-17		
55	3.21E-13	0.00E+00	0.00E+00	0.00E+00	1.72E-15	0.00E+00	3.58E-15	3.26E-13		
56	3.66E-15	0.00E+00	0.00E+00	0.00E+00	1.96E-17	0.00E+00	4.08E-17	3.72E-15		
57	PAHS									
58	Acenaphthalene	1.46E-14	0.00E+00	0.00E+00	7.83E-17	0.00E+00	1.63E-16	1.48E-14		
59	Acenaphthene	1.46E-14	0.00E+00	0.00E+00	7.83E-17	0.00E+00	1.63E-16	1.48E-14		
60	Benzo(a)pyrene	2.93E-14	0.00E+00	0.00E+00	1.57E-16	0.00E+00	3.27E-16	2.98E-14		

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
61	Chrysene		2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.57E-17	0.00E+00	3.27E-17	2.98E-15
62	Dibenzo(a,h)anthracene		2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.57E-16	0.00E+00	3.27E-16	2.98E-14
63	Fluoranthene		2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.57E-16	NA	3.27E-16	2.98E-14
64	Fluorene		2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.57E-17	0.00E+00	3.27E-17	2.98E-15
65	Phenanthrene		1.14E-17	0.00E+00	0.00E+00	0.00E+00	6.12E-20	0.00E+00	1.27E-19	1.16E-17
66	Pyrene		5.86E-14	0.00E+00	0.00E+00	0.00E+00	3.14E-16	0.00E+00	6.54E-16	5.95E-14
67	Parathion		7.25E-18	0.00E+00	0.00E+00	0.00E+00	3.89E-20	0.00E+00	8.09E-20	7.37E-18
68	Pentachlorobenzene		3.60E-15	0.00E+00	0.00E+00	0.00E+00	1.93E-17	NA	4.01E-17	3.66E-15
69	Phenol		5.75E-17	0.00E+00	0.00E+00	0.00E+00	3.09E-19	NA	6.42E-19	5.85E-17
70	Pyridine		3.21E-13	NA	NA	NA	NA	NA	NA	3.21E-13
71	Quinoline		3.30E-15	0.00E+00	0.00E+00	0.00E+00	1.77E-17	0.00E+00	3.68E-17	3.35E-15
72	Tetrachlorobenzene		1.77E-15	0.00E+00	0.00E+00	0.00E+00	9.48E-18	NA	1.97E-17	1.80E-15
73	Tetrachloroethene		6.17E-17	NA	NA	NA	NA	NA	NA	6.17E-17
74	Toluene		9.84E-16	0.00E+00	0.00E+00	0.00E+00	4.80E-18	0.00E+00	9.99E-18	9.84E-16
75	Trichlorobenzene		8.95E-16	NA	NA	NA	NA	NA	NA	9.10E-16
76	Trichloroethene		6.59E-16	0.00E+00	0.00E+00	0.00E+00	7.61E-14	NA	1.58E-13	6.59E-16
77	Unsym. dimethyl hydrazine		1.42E-11	0.00E+00	0.00E+00	0.00E+00	1.54E-19	0.00E+00	3.20E-19	1.44E-11
78	Vapona		2.87E-17	0.00E+00	0.00E+00	0.00E+00	NA	NA	NA	2.91E-17
79	Vinyl acetate		4.07E-16	NA	NA	NA	NA	NA	NA	4.07E-16
80	Vinyl chloride		3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16
81	Xylenes (total)		7.03E-17	NA	NA	NA	NA	NA	NA	7.03E-17
82										
83	INORGANICS									
84	Arsenic		3.86E-13	0.00E+00	0.00E+00	0.00E+00	2.07E-15	0.00E+00	4.31E-16	3.89E-13
85	Cadmium		2.24E-15	0.00E+00	0.00E+00	0.00E+00	1.20E-17	NA	2.50E-18	2.25E-15
86	Chromium (III)		9.92E-15	NA	NA	NA	NA	NA	NA	9.92E-15
87	Chromium (VI)		3.49E-16	NA	NA	NA	NA	NA	NA	3.49E-16
88	Copper		1.47E-14	NA	NA	NA	NA	0.00E+00	NA	1.47E-14
89	Iron		3.57E-10	NA	NA	NA	NA	NA	NA	3.57E-10
90	Lead		1.45E-14	NA	NA	NA	NA	NA	NA	1.45E-14
91	Mercury		1.45E-14	0.00E+00	0.00E+00	0.00E+00	7.77E-17	NA	1.62E-17	1.46E-14
92	Selenium		4.39E-14	NA	NA	NA	NA	NA	NA	4.39E-14
93	Silver		2.00E-16	NA	NA	NA	NA	NA	NA	2.00E-16
94	Zinc		1.15E-13	NA	NA	NA	NA	0.00E+00	NA	1.15E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
 bw 70 Kg
 ef 250 day/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

TABLE 8
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D Inhalation RfD	E Oral RfD	F Dermal RfD
155		1.82E+00	1.00E-01	NC
156	Acetone	1.00E-02	6.00E-02	3.00E-02
157	Acetonitrile	4.39E-03	2.70E-04	NC
158	Acrylonitrile	2.55E-04	3.00E-05	1.50E-05
159	Aldrin	7.76E-03	1.95E-03	9.75E-04
160	Aniline	5.10E-03	5.00E-03	2.50E-03
161	Atrazine	1.00E-01	1.00E-01	5.00E-02
162	Benzaldehyde	3.26E-02	1.00E-03	NC
163	Benzene	5.00E-03	5.00E-03	2.50E-03
164	Benzo(a)pyrene	4.00E+00	4.00E+00	2.00E+00
165	Benzonitrile	8.00E-03	8.00E-03	4.00E-03
166	Benzothiazole	1.00E-03	1.00E-03	5.00E-04
167	Biphenyl	1.33E-03	5.00E-02	NC
168	Bis(2-ethylhexyl)phthalate	5.10E-03	4.00E-03	1.00E-02
169	Carbazole	5.00E-03	5.00E-03	2.50E-03
170	Carbon Tetrachloride	3.16E-02	7.00E-04	NC
171	4-Chloroaniline	4.00E-03	4.00E-03	2.00E-03
172	Chlorobenzene	5.00E-03	2.00E-02	NC
173	4-Chlorobiphenyl	2.45E-02	2.45E-02	1.22E-02
174	4,4'-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
175	Chloroethane	2.65E+00	NA	NC
176	Chloroform	5.00E-02	1.00E-02	NC
177	Dibenzofuran	NA	NA	NA
178	Dichlorobenzenes (total)	4.00E-02	9.00E-02	NC
179	1,1-Dichloroethane	1.00E-01	1.00E-01	NC
180	1,2-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
181	1,1-Dichloroethene	2.04E-02	9.00E-03	NC
182	1,2-Dichloroethene	8.10E-01	2.00E-02	NC
183	1,2-Dichloropropane	3.54E-01	8.60E-03	NC
184	Dieldrin	2.55E-04	5.00E-05	2.50E-05
185	Dimethyldisulfide	8.10E-03	8.10E-03	NC
186	Hexachlorobenzene	8.00E-04	8.00E-04	4.00E-04
187	Hydrazine	1.33E-04	6.00E-04	3.00E-04
188	Lindane	5.10E-04	3.00E-04	1.50E-04
189	Malathion	1.02E-02	2.00E-02	1.00E-02
190	Methyl chloride	1.05E-01	1.80E-02	NC
191	Methylene chloride	8.57E-01	6.00E-02	NC
192	Methyl ethyl ketone	9.00E-02	5.00E-01	2.50E-01
193	4-Methylphenol	1.02E-02	5.00E-02	2.50E-02
194	Monomethyl hydrazine	1.94E-05	2.20E-04	1.10E-04
195	Naphthalene	5.10E-02	4.00E-03	2.00E-03
196	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
197	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
198	PAHs			
199	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
200	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
201	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
202	Chrysene	3.00E-02	3.00E-02	1.50E-02

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 8		
156				
215	Dibenzo(a,h)anthracene	3.00E-02	3.00E-02	1.50E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Fluorene	4.00E-02	4.00E-02	2.00E-02
218	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
219	Pyrene	3.00E-02	3.00E-02	1.50E-02
220	Parathion	5.10E-05	6.00E-03	3.00E-03
221	Pentachlorobenzene	8.00E-04	8.00E-04	4.00E-04
222	Phenol	1.94E-02	6.00E-01	3.00E-01
223	Pyridine	1.63E-02	1.00E-03	NC
224	Quinoline	2.00E-01	2.00E-01	1.00E-01
225	Tetrachlorobenzene	3.00E-04	3.00E-04	1.50E-04
226	Tetrachloroethene	3.46E-01	1.00E-02	NC
227	Toluene	5.71E-01	2.00E-01	NC
228	Trichlorobenzene	3.00E-03	2.00E-02	1.00E-02
229	Trichloroethene	2.74E-01	7.35E-03	NC
230	Unsym. dimethyl hydrazine	1.22E-03	1.22E-03	6.10E-04
231	Vapona	8.00E-04	8.00E-04	4.00E-04
232	Vinyl acetate	2.00E-01	1.00E+00	NC
233	Vinyl chloride	1.33E-02	1.30E-03	NC
234	Xylenes (total)	8.57E-02	2.00E+00	NC
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

	C	H	I	J	K	L	M	N	O
	TABLE 9 ADULT HAZARD INDEX	INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX
155 B									
156									
157									
158									
159									
160									
161 WORKER									
162 BASE CASE									
163									
164									
165									
166 ORGANICS									
167 Acetone	7.11E-16	NA	0.00E+00	0.00E+00	NA	NA	NA	NA	7.11E-16
168 Acetonitrile	1.17E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-13	0.00E+00	4.36E-13	1.18E-10
169 Acrylonitrile	1.14E-10	NA	NA	NA	NA	NA	NA	NA	1.14E-10
170 Aldrin	7.13E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-16	0.00E+00	1.35E-15	8.81E-15
171 Aniline	8.49E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-13	0.00E+00	7.54E-13	9.42E-12
172 Atrazine	7.98E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-16	0.00E+00	1.82E-15	8.20E-14
173 Benzaldehyde	3.00E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-15	0.00E+00	6.70E-15	3.08E-13
174 Benzene	1.16E-14	NA	NA	NA	NA	NA	NA	NA	1.16E-14
175 Benzofuran	2.92E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-13	0.00E+00	6.51E-13	3.00E-11
176 Benzoic Acid	3.67E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-17	0.00E+00	8.20E-17	3.77E-15
177 Benzonitrile	4.01E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-13	0.00E+00	8.94E-13	4.12E-11
178 Benzothiazole	1.37E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.33E-16	0.00E+00	3.05E-15	1.40E-13
179 Biphenyl	1.10E-10	NA	NA	NA	NA	NA	NA	NA	1.10E-10
180 Bis(2-ethylhexyl)phthalate	1.58E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-16	0.00E+00	9.00E-17	1.60E-14
181 Carbazole	1.32E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E-16	0.00E+00	2.94E-15	1.35E-13
182 Carbon Tetrachloride	6.05E-14	NA	NA	NA	NA	NA	NA	NA	6.05E-14
183 4-Chloroaniline	9.43E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-17	0.00E+00	2.10E-16	9.69E-15
184 Chlorobenzene	1.81E-14	NA	NA	NA	NA	NA	NA	NA	1.81E-14
185 4-Chlorobiphenyl	3.79E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-17	0.00E+00	8.50E-17	3.90E-15
186 4,4'-Chlorobiphenyl	2.01E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-18	0.00E+00	4.50E-18	2.06E-16
187 Chloroethane	1.26E-15	NE	NE	NE	NE	NE	NE	NE	1.26E-15
188 Chloroform	3.25E-13	NE	NE	NE	NE	NE	NE	NE	3.25E-13
189 Dibenzofuran	NE	NE	NE	NE	NE	NE	NE	NE	NE
190 Dichlorobenzenes (total)	9.43E-15	NA	NA	NA	NA	NA	NA	NA	9.43E-15
191 1,1-Dichloroethane	1.08E-14	NA	NA	NA	NA	NA	NA	NA	1.08E-14
192 1,2-Dichloroethane	8.26E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-16	0.00E+00	1.54E-15	1.02E-14
193 1,1-Dichloroethene	2.83E-14	NA	NA	NA	NA	NA	NA	NA	2.83E-14
194 1,2-Dichloroethene	6.16E-16	NA	NA	NA	NA	NA	NA	NA	6.16E-16
195 1,2-Dichloropropane	6.04E-16	NA	NA	NA	NA	NA	NA	NA	6.04E-16
196 Dieldrin	1.31E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-16	0.00E+00	1.49E-15	1.49E-14
197 Dimethyldisulfide	1.13E-13	NA	NA	NA	NA	NA	NA	NA	1.13E-13
198 Hexachlorobenzene	1.10E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-14	0.00E+00	2.46E-13	1.13E-11
199 Hydrazine	8.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-10	0.00E+00	4.24E-10	8.63E-08
200 Lindane	3.04E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-17	0.00E+00	1.15E-16	3.19E-15
201 Malathion	4.49E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-18	0.00E+00	5.11E-18	4.56E-16
202 Methyl chloride	4.27E-15	NA	NA	NA	NA	NA	NA	NA	4.27E-15
203 Methylene chloride	3.15E-14	NA	NA	NA	NA	NA	NA	NA	3.15E-14
204 Methyl ethyl ketone	6.29E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.07E-18	0.00E+00	2.53E-17	6.32E-15
205 4-Methylphenol	5.04E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.51E-17	0.00E+00	2.29E-16	5.06E-14
206 Monomethyl hydrazine	1.85E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.77E-11	0.00E+00	3.65E-10	1.86E-07
207 Naphthalene	1.19E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.13E-17	0.00E+00	3.38E-16	1.61E-15
208 Naphthalene carbonitrile	6.29E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-13	0.00E+00	1.79E-12	8.50E-12
209 n-Nitrosodimethylamine	1.31E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E-14	0.00E+00	2.92E-13	1.34E-11
210 PAHs									
211 Acenaphthalene	2.43E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-15	0.00E+00	5.43E-15	2.50E-13
212 Acenaphthene	2.43E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-15	0.00E+00	5.43E-15	2.50E-13
213 Benzo(a)pyrene	9.76E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-15	0.00E+00	2.18E-14	1.00E-12
214 Chrysene	9.76E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-16	0.00E+00	2.18E-15	1.00E-13

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

TABLE 9									
B	C	H	I	J	K	L	M	N	O
155	Dibenzo(a,h)anthracene	9.76E-13	0.00E+00	0.00E+00	0.00E+00	5.24E-15	0.00E+00	2.18E-14	1.00E-12
156	Fluoranthene	7.32E-13	0.00E+00	0.00E+00	0.00E+00	3.93E-15	NA	1.63E-14	7.52E-13
216	Fluorene	7.32E-14	0.00E+00	0.00E+00	0.00E+00	3.93E-16	0.00E+00	1.63E-15	7.52E-14
217	Phenanthrene	3.80E-16	0.00E+00	0.00E+00	0.00E+00	2.04E-18	0.00E+00	8.48E-18	3.91E-16
218	Pyrene	1.95E-12	0.00E+00	0.00E+00	0.00E+00	1.05E-14	0.00E+00	4.36E-14	2.01E-12
219	Parathion	1.42E-13	0.00E+00	0.00E+00	0.00E+00	6.49E-18	0.00E+00	2.70E-17	1.42E-13
220	Pentachlorobenzene	4.49E-12	0.00E+00	0.00E+00	0.00E+00	2.41E-14	NA	1.00E-13	4.62E-12
221	Phenol	2.97E-15	0.00E+00	0.00E+00	0.00E+00	5.14E-19	NA	2.14E-18	2.97E-15
222	Pyridine	1.97E-11	NA	NA	NA	NA	NA	NA	1.97E-11
223	Quinoline	1.65E-14	0.00E+00	0.00E+00	0.00E+00	8.85E-17	0.00E+00	3.68E-16	1.69E-14
224	Tetrachlorobenzene	5.89E-12	0.00E+00	0.00E+00	0.00E+00	3.16E-14	NA	1.31E-13	6.05E-12
225	Tetrachloroethene	1.78E-16	NA	NA	NA	NA	NA	NA	1.78E-16
226	Toluene	1.72E-15	NA	NA	NA	NA	NA	NA	1.72E-15
227	Trichlorobenzene	2.98E-13	0.00E+00	0.00E+00	0.00E+00	2.40E-16	0.00E+00	9.99E-16	3.00E-13
228	Trichloroethene	2.40E-15	NA	NA	NA	NA	NA	NA	2.40E-15
229	Unsym. dimethyl hydrazine	1.16E-08	0.00E+00	0.00E+00	0.00E+00	6.24E-11	0.00E+00	2.59E-10	1.19E-08
230	Vapona	3.58E-14	0.00E+00	0.00E+00	0.00E+00	1.92E-16	0.00E+00	8.00E-16	3.68E-14
231	Vinyl acetate	2.03E-15	NA	NA	NA	NA	NA	NA	2.03E-15
232	Vinyl chloride	2.83E-14	NA	NA	NA	NA	NA	NA	2.83E-14
233	Xylenes (total)	8.20E-16	NA	NA	NA	NA	NA	NA	8.20E-16
234									
235									
236	INORGANICS								
237	Arsenic	1.89E-09	0.00E+00	0.00E+00	0.00E+00	2.07E-12	0.00E+00	8.62E-12	1.90E-09
238	Cadmium	4.39E-11	0.00E+00	0.00E+00	0.00E+00	1.20E-14	NA	5.00E-14	4.40E-11
239	Chromium (III)	1.95E-11	NA	NA	NA	NA	NA	NA	1.95E-11
240	Chromium (VI)	6.85E-12	NA	NA	NA	NA	NA	NA	6.85E-12
241	Copper	1.47E-12	NA	NA	NA	NA	0.00E+00	NA	1.47E-12
242	Iron	3.50E-07	NA	NA	NA	NA	NA	NA	3.50E-07
243	Mercury	1.69E-10	0.00E+00	0.00E+00	0.00E+00	2.59E-13	NA	1.08E-12	1.70E-10
244	Selenium	2.15E-10	NA	NA	NA	NA	NA	NA	2.15E-10
245	Silver	1.96E-11	NA	NA	NA	NA	NA	NA	1.96E-11
246	Zinc	1.40E-11	NA	NA	NA	NA	0.00E+00	NA	1.40E-11
247									
248	Total (Hazard Index)	6.35E-07	0.00E+00	0.00E+00	0.00E+00	2.56E-10	0.00E+00	1.06E-09	6.36E-07

A	B	C	F
253	TABLE 10		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256	WORKER		
257	BASE CASE		
258			
259	Adult		
260	Inhalation		92.6566
261			
262	Ingestion		1.4231
263	Vegetables		NA
264	Milk		NA
265	Beef		NA
266	Soil\Dust		1.4231
267	Fish		NA
268			
269	Dermal		5.9203
270			
271	Child		
272	Inhalation		NA
273			
274	Ingestion		NA
275	Vegetables		NA
276	Milk		NA
277	Beef		NA
278	Soil\Dust		NA
279	Fish		NA
280			
281	Dermal		NA
282			
283	Infant		
284	Inhalation		NA
285			
286	Breast Milk Ingestion		NA
287			
288	Total		100.0000
290			

9.4.2 Sensitivity Case Emissions — Worker Scenario

TABLE 1

A	B	C	D	E	F	G	H	I	J	K
1	2	3	4	5	6	7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22
23	24	25	26	27	28	29	30	31	32	33
34	35	36	37	38	39	40	41	42	43	44
45	46	47	48	49	50	51	52	53	54	55
56	57	58	59	60						
61	62	63	64	65	66	67	68	69	70	71
72	73	74	75	76	77	78	79	80	81	82
83	84	85	86	87	88	89	90	91	92	93
94	95	96	97	98	99	100	101	102	103	104
105	106	107	108	109	110	111	112	113	114	115
116	117	118	119	120	121	122	123	124	125	126
127	128	129	130	131	132	133	134	135	136	137
138	139	140	141	142	143	144	145	146	147	148
149	150	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180	181
182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199	200	201	202	203
204	205	206	207	208	209	210	211	212	213	214
215	216	217	218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236
237	238	239	240	241	242	243	244	245	246	247
248	249	250	251	252	253	254	255	256	257	258
259	260	261	262	263	264	265	266	267	268	269
270	271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290	291
292	293	294	295	296	297	298	299	300	301	302
303	304	305	306	307	308	309	310	311	312	313
314	315	316	317	318	319	320	321	322	323	324
325	326	327	328	329	330	331	332	333	334	335
336	337	338	339	340	341	342	343	344	345	346
347	348	349	350	351	352	353	354	355	356	357
358	359	360	361	362	363	364	365	366	367	368
369	370	371	372	373	374	375	376	377	378	379
380	381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400	401
402	403	404	405	406	407	408	409	410	411	412
413	414	415	416	417	418	419	420	421	422	423
424	425	426	427	428	429	430	431	432	433	434
435	436	437	438	439	440	441	442	443	444	445
446	447	448	449	450	451	452	453	454	455	456
457	458	459	460	461	462	463	464	465	466	467
468	469	470	471	472	473	474	475	476	477	478
479	480	481	482	483	484	485	486	487	488	489
490	491	492	493	494	495	496	497	498	499	500
501	502	503	504	505	506	507	508	509	510	511
512	513	514	515	516	517	518	519	520	521	522
523	524	525	526	527	528	529	530	531	532	533
534	535	536	537	538	539	540	541	542	543	544
545	546	547	548	549	550	551	552	553	554	555
556	557	558	559	560	561	562	563	564	565	566
567	568	569	570	571	572	573	574	575	576	577
578	579	580	581	582	583	584	585	586	587	588
589	590	591	592	593	594	595	596	597	598	599
600	601	602	603	604	605	606	607	608	609	610
611	612	613	614	615	616	617	618	619	620	621
622	623	624	625	626	627	628	629	630	631	632
633	634	635	636	637	638	639	640	641	642	643
644	645	646	647	648	649	650	651	652	653	654
655	656	657	658	659	660	661	662	663	664	665
666	667	668	669	670	671	672	673	674	675	676
677	678	679	680	681	682	683	684	685	686	687
688	689	690	691	692	693	694	695	696	697	698
699	700	701	702	703	704	705	706	707	708	709
710	711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730	731
732	733	734	735	736	737	738	739	740	741	742
743	744	745	746	747	748	749	750	751	752	753
754	755	756	757	758	759	760	761	762	763	764
765	766	767	768	769	770	771	772	773	774	775
776	777	778	779	780	781	782	783	784	785	786
787	788	789	790	791	792	793	794	795	796	797
798	799	800	801	802	803	804	805	806	807	808
809	810	811	812	813	814	815	816	817	818	819
820	821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840	841
842	843	844	845	846	847	848	849	850	851	852
853	854	855	856	857	858	859	860	861	862	863
864	865	866	867	868	869	870	871	872	873	874
875	876	877	878	879	880	881	882	883	884	885
886	887	888	889	890	891	892	893	894	895	896
897	898	899	900	901	902	903	904	905	906	907
908	909	910	911	912	913	914	915	916	917	918
919	920	921	922	923	924	925	926	927	928	929
930	931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950	951
952	953	954	955	956	957	958	959	960	961	962
963	964	965	966	967	968	969	970	971	972	973
974	975	976	977	978	979	980	981	982	983	984
985	986	987	988	989	990	991	992	993	994	995
996	997	998	999	1000	1001	1002	1003	1004	1005	1006
1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017
1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028
1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039
1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050
1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061
1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072
1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083
1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094
1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105
1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116
1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127
1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138
1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149
1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160
1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171
1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182
1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193
1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204
1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215
1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226
1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237
1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248
1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259
1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270
1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281
1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292
1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303
1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314
1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325
1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336
1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347
1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358
1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369
1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380
1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	

A	B	C	D	E	F	G	H	I	J	K
2			TABLE 1							
61	Chrysene		2.85E-10	2.99E-11	1.27E-12	1.38E-13	8.79E-12	8.92E-12	1.76E-11	1.78E-11
62	Dibenzo(a,h)anthracene		2.85E-09	2.99E-10	1.27E-11	1.38E-12	8.79E-11	8.92E-11	1.76E-10	1.78E-10
63	Fluoranthene		2.85E-09	2.99E-10	1.27E-11	1.38E-12	8.79E-11	8.92E-11	1.76E-10	1.78E-10
64	Fluorene		2.85E-10	2.99E-11	1.27E-12	1.38E-13	8.79E-12	8.92E-12	1.76E-11	1.78E-11
65	Phenanthrene		1.11E-12	1.17E-13	4.95E-15	5.36E-16	3.42E-14	3.47E-14	6.85E-14	6.95E-14
66	Pyrene		7.06E-09	5.98E-10	2.54E-11	2.75E-12	1.76E-10	1.78E-10	3.52E-10	3.57E-10
67	Parathion		5.07E-13	7.41E-14	3.15E-15	3.41E-16	2.18E-14	2.21E-14	4.36E-14	4.42E-14
68	Pentachlorobenzene		3.50E-10	3.67E-11	1.56E-12	1.69E-13	1.08E-11	1.10E-11	2.16E-11	2.19E-11
69	Phenol		5.60E-12	5.88E-13	2.50E-14	2.70E-15	1.73E-13	1.75E-13	3.46E-13	3.51E-13
70	Pyridine		3.12E-08	3.28E-09	NA	NA	NA	NA	NA	NA
71	Quinoline		3.21E-10	3.37E-11	1.43E-12	1.55E-13	9.90E-12	1.00E-11	1.98E-11	2.01E-11
72	Tetrachlorobenzene		1.72E-10	1.81E-11	7.67E-13	8.31E-14	5.31E-12	5.38E-12	1.06E-11	1.08E-11
73	Tetrachloroethene		6.01E-12	6.31E-13	NA	NA	NA	NA	NA	NA
74	Toluene		9.58E-11	1.01E-11	3.88E-13	4.21E-14	2.69E-12	2.73E-12	5.37E-12	5.45E-12
75	Trichlorobenzene		8.71E-11	9.15E-12	NA	NA	NA	NA	NA	NA
76	Trichloroethene		6.41E-11	6.73E-12	NA	NA	NA	NA	NA	NA
77	Unsym. dimethyl hydrazine		1.38E-06	1.45E-07	6.15E-09	6.67E-10	4.26E-08	4.32E-08	8.51E-08	8.64E-08
78	Vapona		2.79E-12	2.93E-13	1.24E-14	1.35E-15	8.61E-14	8.73E-14	1.72E-13	1.75E-13
79	Vinyl acetate		3.96E-11	4.16E-12	NA	NA	NA	NA	NA	NA
80	Vinyl chloride		3.67E-11	3.85E-12	NA	NA	NA	NA	NA	NA
81	Xylenes (total)		6.84E-12	7.18E-13	NA	NA	NA	NA	NA	NA

INORGANICS

83	Arsenic		4.24E-08	4.45E-09	1.89E-10	2.05E-11	1.31E-09	1.33E-09	2.62E-09	2.65E-09
84	Cadmium		3.10E-10	3.26E-11	1.38E-12	1.50E-13	9.56E-12	9.70E-12	1.91E-11	1.94E-11
85	Chromium (III)		1.26E-09	1.32E-10	NA	NA	NA	NA	NA	NA
86	Chromium (VI)		4.42E-11	4.64E-12	NA	NA	NA	NA	NA	NA
87	Copper		3.17E-09	3.33E-10	NA	NA	NA	NA	NA	NA
88	Iron		9.68E-05	1.02E-05	NA	NA	NA	NA	NA	NA
89	Lead		1.63E-09	1.71E-10	7.27E-12	7.87E-13	5.03E-11	5.10E-11	1.01E-10	1.02E-10
90	Mercury		2.02E-09	2.12E-10	9.01E-12	9.76E-13	6.23E-11	6.32E-11	1.25E-10	1.26E-10
91	Selenium		5.21E-09	5.47E-10	NA	NA	NA	NA	NA	NA
92	Silver		3.24E-11	3.40E-12	NA	NA	NA	NA	NA	NA
93	Zinc		1.43E-08	1.50E-09	NA	NA	NA	NA	NA	NA

2 yrs ACCUMULATION TIME AT
 0.2 M SOIL DEPTH OF MIXING SD
 0.1 M SOIL DEPTH OF MIXING SD
 1.43E+03 Kg/M3 SOIL BULK DENSITY BD
 1.00E+03 mg/g
 3.15E+07 sec/yr

Dilution Factor	CO =	D*AT*1000
1.05E-01 INHALATION		-----
Deposition Factor		SD*BD
4.83E-04 DRY		
4.46E-03 DRY/NET		
DFI		
DF		
DDF		
TDF		
AC = ER * DFI		
D = ER * X DF		

A	B	C	T	U	V	W	X	Y	Z	AA
2			TABLE 2							
3			ADULT TOTAL							
4			EXPOSURE - AVERAGE							
5										
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ORGANICS

Acetone	1.29E-15	NA	0.00E+00	NA	0.00E+00	0.00E+00	6.19E-15	NA	NA	1.29E-15
Acetonitrile	1.77E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-15	0.00E+00	1.29E-14	1.19E-12
Acrylonitrile	4.98E-13	NA	NA	NA	NA	NA	NA	NA	NA	4.98E-13
Aldrin	1.82E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-21	0.00E+00	2.00E-20	1.85E-18
Aniline	6.59E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-16	0.00E+00	7.24E-16	6.69E-14
Atrazine	4.07E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-18	0.00E+00	4.48E-18	4.13E-16
Benzaldehyde	3.00E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-16	0.00E+00	3.30E-16	3.05E-14
Benzene	3.77E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.77E-16
Benzofuran	1.46E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-16	0.00E+00	1.60E-15	1.48E-13
Benzoic Acid	1.47E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.77E-17	0.00E+00	1.62E-16	1.49E-14
Benzonitrile	3.21E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-15	0.00E+00	3.53E-15	3.26E-13
Benzothiazole	1.37E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-19	0.00E+00	1.50E-18	1.39E-16
Biphenyl	1.47E-13	NA	NA	NA	NA	NA	NA	NA	NA	1.47E-13
Bis(2-ethylhexyl)phthalate	8.07E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-19	0.00E+00	8.87E-19	8.20E-17
Carbazole	6.59E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-18	0.00E+00	7.24E-18	6.69E-16
Carbon Tetrachloride	1.91E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.91E-15
4-Chloroaniline	3.77E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-19	0.00E+00	4.15E-19	3.83E-17
Chlorobenzene	9.06E-17	NA	NA	NA	NA	NA	NA	NA	NA	9.06E-17
4-Chlorobiphenyl	9.29E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.91E-19	0.00E+00	1.02E-18	9.44E-17
4,4'-Chlorobiphenyl	4.67E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.47E-20	0.00E+00	5.14E-20	4.75E-18
Chloroethane	3.33E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-17	0.00E+00	3.66E-17	3.38E-15
Chloroform	1.62E-14	NA	NA	NA	NA	NA	NA	NA	NA	1.62E-14
Dibenzofuran	2.93E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-17	0.00E+00	3.22E-17	2.98E-15
Dichlorobenzenes (total)	3.77E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.77E-16
1,4-Dichlorobenzene	2.38E-17	NA	NA	NA	NA	NA	NA	NA	NA	2.38E-17
1,1-Dichloroethane	1.08E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.08E-15
1,2-Dichloroethane	3.37E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-18	0.00E+00	3.71E-18	3.42E-16
1,1-Dichloroethene	5.77E-16	NA	NA	NA	NA	NA	NA	NA	NA	5.77E-16
1,2-Dichloroethene	4.99E-16	NA	NA	NA	NA	NA	NA	NA	NA	4.99E-16
1,2-Dichloropropane	2.14E-16	NA	NA	NA	NA	NA	NA	NA	NA	2.14E-16
Dieldrin	3.34E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-20	0.00E+00	3.67E-20	3.39E-18
Dimethyldisulfide	9.17E-16	NA	NA	NA	NA	NA	NA	NA	NA	9.17E-16
Hexachlorobenzene	8.83E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.67E-17	0.00E+00	9.71E-17	8.97E-15
Hydrazine	1.14E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-14	0.00E+00	1.25E-13	1.16E-11
Lindane	1.53E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E-21	0.00E+00	1.71E-20	1.58E-18
Malathion	4.58E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-20	0.00E+00	5.04E-20	4.66E-18
Methyl chloride	4.48E-16	NA	NA	NA	NA	NA	NA	NA	NA	4.48E-16
Methylene chloride	2.70E-14	NA	NA	NA	NA	NA	NA	NA	NA	2.70E-14
Methyl ethyl ketone	5.66E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-18	0.00E+00	6.23E-18	5.75E-16
4-Methylphenol	5.14E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-18	0.00E+00	5.65E-18	5.22E-16
Monomethyl hydrazine	3.60E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-14	0.00E+00	3.96E-14	3.65E-12
Naphthalene	6.06E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-19	0.00E+00	6.67E-19	6.16E-17
Naphthalene carbonitrile	3.21E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-15	0.00E+00	3.53E-15	3.26E-13
n-Nitrosodimethylamine	3.66E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-17	0.00E+00	4.02E-17	3.72E-15
PAHs										
Acenaphthalene	1.46E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-17	0.00E+00	1.60E-16	1.48E-14
Acenaphthene	1.46E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-17	0.00E+00	1.60E-16	1.48E-14
Benzo(a)pyrene	2.93E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-16	0.00E+00	3.22E-16	2.98E-14

A	B	C	T	U	V	W	X	Y	Z	AA
2			TABLE 2							
61		Chrysene	2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.55E-17	0.00E+00	3.22E-17	2.98E-15
62		Dibenzo(a,h)anthracene	2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.55E-16	0.00E+00	3.22E-16	2.98E-14
63		Fluoranthene	2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.55E-16	NA	3.22E-16	2.98E-14
64		Fluorene	2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.55E-17	0.00E+00	3.22E-17	2.98E-15
65		Phenanthrene	1.14E-17	0.00E+00	0.00E+00	0.00E+00	6.03E-20	0.00E+00	1.25E-19	1.16E-17
66		Pyrene	5.86E-14	0.00E+00	0.00E+00	0.00E+00	3.10E-16	0.00E+00	6.44E-16	5.95E-14
67		Parathion	7.25E-18	0.00E+00	0.00E+00	0.00E+00	3.84E-20	0.00E+00	7.98E-20	7.37E-18
68		Pentachlorobenzene	3.60E-15	0.00E+00	0.00E+00	0.00E+00	1.90E-17	NA	3.96E-17	3.65E-15
69		Phenol	5.75E-17	0.00E+00	0.00E+00	0.00E+00	3.04E-19	NA	6.33E-19	5.85E-17
70		Pyridine	3.21E-13	NA	NA	NA	NA	NA	NA	3.21E-13
71		Quinoline	3.30E-15	0.00E+00	0.00E+00	0.00E+00	1.74E-17	0.00E+00	3.63E-17	3.35E-15
72		Tetrachlorobenzene	1.77E-15	0.00E+00	0.00E+00	0.00E+00	9.35E-18	NA	1.94E-17	1.80E-15
73		Tetrachloroethene	6.17E-17	NA	NA	NA	NA	NA	6.17E-17	6.17E-17
74		Toluene	9.84E-16	NA	NA	NA	NA	NA	NA	9.84E-16
75		Trichlorobenzene	8.95E-16	0.00E+00	0.00E+00	0.00E+00	4.73E-18	0.00E+00	9.84E-18	9.09E-16
76		Trichloroethene	6.59E-16	NA	NA	NA	NA	NA	NA	6.59E-16
77		Unsym. dimethyl hydrazine	1.42E-11	0.00E+00	0.00E+00	0.00E+00	7.50E-14	0.00E+00	1.56E-13	1.44E-11
78		Vapona	2.87E-17	0.00E+00	0.00E+00	0.00E+00	1.52E-19	0.00E+00	3.15E-19	2.91E-17
79		Vinyl acetate	4.07E-16	NA	NA	NA	NA	NA	NA	4.07E-16
80		Vinyl chloride	3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16
81		Xylenes (total)	7.03E-17	NA	NA	NA	NA	NA	NA	7.03E-17
82										
83		INORGANICS								
84		Arsenic	4.36E-13	0.00E+00	0.00E+00	0.00E+00	2.30E-15	0.00E+00	4.79E-16	4.38E-13
85		Cadmium	3.18E-15	0.00E+00	0.00E+00	0.00E+00	1.68E-17	NA	3.50E-18	3.21E-15
86		Chromium (III)	1.29E-14	NA	NA	NA	NA	NA	NA	1.29E-14
87		Chromium (VI)	4.54E-16	NA	NA	NA	NA	NA	NA	4.54E-16
88		Copper	3.26E-14	NA	NA	NA	NA	0.00E+00	NA	3.26E-14
89		Iron	9.95E-10	NA	NA	NA	NA	NA	NA	9.95E-10
90		Lead	1.67E-14	NA	NA	NA	NA	NA	NA	1.67E-14
91		Mercury	2.08E-14	0.00E+00	0.00E+00	0.00E+00	1.10E-16	NA	2.28E-17	2.09E-14
92		Selenium	5.35E-14	NA	NA	NA	NA	NA	NA	5.35E-14
93		Silver	3.33E-16	NA	NA	NA	NA	NA	NA	3.33E-16
94		Zinc	1.47E-13	NA	NA	NA	NA	0.00E+00	NA	1.47E-13
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br 10 M3/day
 bw 70 kg
 ef 250 days/yr
 cf 365000 (1000 ug/mg)*(365 day/yr)
 Inhalation dose = Cair*br*ef/bw/cf
 D*AT*1000
 SD*BD
 AC = ER * DF1
 D = ER * X DF

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
3			ADULT TOTAL EXPOSURE - MAXIMUM							
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SENSITIVITY CASE

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ORGANICS

Acetone	1.29E-15	NA	0.00E+00	NA	0.00E+00	0.00E+00	NA	0.00E+00	NA	1.29E-15
Acetonitrile	1.17E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-14	1.19E-12
Acrylonitrile	4.98E-13	NA	NA	NA	NA	NA	NA	NA	NA	4.98E-13
Aldrin	1.82E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-20	1.85E-18
Aniline	6.59E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E-16	6.69E-14
Atrazine	4.07E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-18	4.14E-16
Benzaldehyde	3.00E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-16	3.05E-14
Benzene	3.77E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.77E-16
Benzo(a)pyrene	1.46E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-15	1.48E-13
Benzoic Acid	1.47E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-16	1.49E-14
Benzonitrile	3.21E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-15	3.26E-13
Benzothiazole	1.37E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-18	1.39E-16
Biphenyl	1.47E-13	NA	NA	NA	NA	NA	NA	NA	NA	1.47E-13
Bis(2-ethylhexyl)phthalate	8.07E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-19	8.20E-17
Carbazole	6.59E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.35E-18	6.69E-16
Carbon Tetrachloride	1.91E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.91E-15
4-Chloroaniline	3.77E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-19	3.83E-17
Chlorobenzene	9.06E-17	NA	NA	NA	NA	NA	NA	NA	NA	9.06E-17
4-Chlorobiphenyl	9.29E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-18	9.44E-17
4,4'-Chlorobiphenyl	4.67E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E-20	4.75E-18
Chloroethane	3.33E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-17	3.38E-15
Chloroform	1.62E-14	NA	NA	NA	NA	NA	NA	NA	NA	1.62E-14
Dibenzofuran	2.93E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-17	2.98E-15
Dichlorobenzenes (total)	3.77E-16	NA	NA	NA	NA	NA	NA	NA	NA	3.77E-16
1,4-Dichlorobenzene	2.38E-17	NA	NA	NA	NA	NA	NA	NA	NA	2.38E-17
1,1-Dichloroethane	1.08E-15	NA	NA	NA	NA	NA	NA	NA	NA	1.08E-15
1,2-Dichloroethane	3.37E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-18	3.43E-16
1,1-Dichloroethene	5.77E-16	NA	NA	NA	NA	NA	NA	NA	NA	5.77E-16
1,2-Dichloroethene	4.99E-16	NA	NA	NA	NA	NA	NA	NA	NA	4.99E-16
1,2-Dichloropropane	2.14E-16	NA	NA	NA	NA	NA	NA	NA	NA	2.14E-16
Dieldrin	3.34E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-20	3.39E-18
Dimethyldisulfide	9.17E-16	NA	NA	NA	NA	NA	NA	NA	NA	9.17E-16
Hexachlorobenzene	8.83E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.85E-17	8.97E-15
Hydrazine	1.14E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-13	1.16E-11
Lindane	1.55E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-20	1.58E-18
Malathion	4.58E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E-20	4.66E-18
Methyl chloride	4.48E-16	NA	NA	NA	NA	NA	NA	NA	NA	4.48E-16
Methylene chloride	2.70E-14	NA	NA	NA	NA	NA	NA	NA	NA	2.70E-14
Methyl ethyl ketone	5.66E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E-18	5.75E-16
4-Methylphenol	5.14E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.73E-18	5.22E-16
Monomethyl hydrazine	3.60E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-14	3.66E-12
Naphthalene	6.06E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.76E-19	6.16E-17
Naphthalene carbonitrile	3.21E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-15	3.26E-13
n-Nitrosodimethylamine	3.66E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-17	3.72E-15
PAHS										
Acenaphthalene	1.46E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-16	1.48E-14
Acenaphthene	1.46E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-16	1.48E-14
Benzo(a)pyrene	2.93E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-16	2.98E-14

A	B	C	AD	AE	AF	AG	AH	AI	AJ	AK
2			TABLE 3							
61	Chrysene		2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.57E-17	0.00E+00	3.27E-17	2.98E-15
62	Dibenzo(a,h)anthracene		2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.57E-16	0.00E+00	3.27E-16	2.98E-14
63	Fluoranthene		2.93E-14	0.00E+00	0.00E+00	0.00E+00	1.57E-16	NA	3.27E-16	2.98E-14
64	Fluorene		2.93E-15	0.00E+00	0.00E+00	0.00E+00	1.57E-17	0.00E+00	3.27E-17	2.98E-15
65	Phenanthrene		1.14E-17	0.00E+00	0.00E+00	0.00E+00	6.12E-20	0.00E+00	1.27E-19	1.16E-17
66	Pyrene		5.86E-14	0.00E+00	0.00E+00	0.00E+00	3.14E-16	0.00E+00	6.54E-16	5.95E-14
67	Parathion		7.25E-18	0.00E+00	0.00E+00	0.00E+00	3.89E-20	0.00E+00	8.09E-20	7.37E-18
68	Pentachlorobenzene		3.60E-15	0.00E+00	0.00E+00	0.00E+00	1.93E-17	NA	4.01E-17	3.66E-15
69	Phenol		5.75E-17	0.00E+00	0.00E+00	0.00E+00	3.09E-19	NA	6.42E-19	5.85E-17
70	Pyridine		3.21E-13	NA	NA	NA	NA	NA	NA	3.21E-13
71	Quinoline		3.30E-15	0.00E+00	0.00E+00	0.00E+00	1.77E-17	0.00E+00	3.68E-17	3.35E-15
72	Tetrachlorobenzene		1.77E-15	0.00E+00	0.00E+00	0.00E+00	9.48E-18	NA	1.97E-17	1.80E-15
73	Tetrachloroethene		6.17E-17	NA	NA	NA	NA	NA	NA	6.17E-17
74	Toluene		9.84E-16	NA	NA	NA	NA	NA	NA	9.84E-16
75	Trichlorobenzene		8.95E-16	0.00E+00	0.00E+00	0.00E+00	4.80E-18	0.00E+00	9.99E-18	9.10E-16
76	Trichloroethene		6.59E-16	NA	NA	NA	NA	NA	NA	6.59E-16
77	Unsym. dimethyl hydrazine		1.42E-11	0.00E+00	0.00E+00	0.00E+00	7.61E-14	0.00E+00	1.58E-13	1.44E-11
78	Vapona		2.87E-17	0.00E+00	0.00E+00	0.00E+00	1.54E-19	0.00E+00	3.20E-19	2.91E-17
79	Vinyl acetate		4.07E-16	NA	NA	NA	NA	NA	NA	4.07E-16
80	Vinyl chloride		3.77E-16	NA	NA	NA	NA	NA	NA	3.77E-16
81	Xylenes (total)		7.03E-17	NA	NA	NA	NA	NA	NA	7.03E-17
82										
83	INORGANICS									
84	Arsenic		4.36E-13	0.00E+00	0.00E+00	0.00E+00	2.34E-15	0.00E+00	4.86E-16	4.38E-13
85	Cadmium		3.18E-15	0.00E+00	0.00E+00	0.00E+00	1.71E-17	NA	3.55E-18	3.21E-15
86	Chromium (III)		1.29E-14	NA	NA	NA	NA	NA	NA	1.29E-14
87	Chromium (VI)		4.54E-16	NA	NA	NA	NA	NA	NA	4.54E-16
88	Copper		3.26E-14	NA	NA	NA	NA	0.00E+00	NA	3.26E-14
89	Iron		9.95E-10	NA	NA	NA	NA	NA	NA	9.95E-10
90	Lead		1.67E-14	NA	NA	NA	NA	NA	NA	1.67E-14
91	Mercury		2.08E-14	0.00E+00	0.00E+00	0.00E+00	1.11E-16	NA	2.32E-17	2.09E-14
92	Selenium		5.35E-14	NA	NA	NA	NA	NA	NA	5.35E-14
93	Silver		3.33E-16	NA	NA	NA	NA	NA	NA	3.33E-16
94	Zinc		1.47E-13	NA	NA	NA	NA	0.00E+00	NA	1.47E-13
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br 10 M3/day
bw 70 kg
ef 250 day/yr
cf 365000 (1000 ug/mg)*(365 day/yr)

Inhalation dose = Cair*br*ef/bw/cf

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
2			TABLE 4							
3			CHILD TOTAL EXPOSURE - AVERAGE							
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ORGANICS

Acetone	8.54E-15	NA	0.00E+00	NA	0.00E+00	NA	9.08E-14	NA	3.09E-14	8.54E-15
Acetonitrile	7.72E-12	NA	0.00E+00	NA	0.00E+00	NA	NA	1.75E-20	NA	7.84E-12
Acrylonitrile	3.29E-12	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	3.29E-12
Aldrin	1.20E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-19	6.34E-27	4.80E-20	1.22E-17
Aniline	4.34E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-15	5.27E-19	1.74E-15	4.41E-13
Atrazine	2.68E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-17	0.00E+00	1.07E-17	2.72E-15
Benzaldehyde	1.98E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-15	5.67E-20	7.92E-16	2.01E-13
Benzene	2.49E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	2.49E-15
Benzo(a)pyrene	9.62E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-14	1.25E-18	3.85E-15	9.77E-13
Benzo(b)fluoranthene	9.62E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-15	4.96E-20	3.88E-16	9.84E-14
Benzo(k)fluoranthene	2.11E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.48E-14	6.74E-19	8.46E-15	2.15E-12
Benzothiazole	9.01E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-17	5.67E-24	3.61E-18	9.15E-16
Biphenyl	9.69E-13	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	9.69E-13
Bis(2-ethylhexyl)phthalate	5.32E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-18	7.34E-24	2.13E-18	5.40E-16
Carbazole	4.34E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-17	7.46E-21	1.74E-17	4.41E-15
Carbon Tetrachloride	1.26E-14	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	1.26E-14
4-Chloroaniline	2.49E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-18	2.13E-21	9.95E-19	2.53E-16
Chlorobenzene	5.97E-16	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	5.97E-16
4-Chlorobiphenyl	6.12E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.20E-18	7.66E-22	2.45E-18	6.22E-16
4,4'-Chlorobiphenyl	3.08E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.62E-19	1.29E-23	1.23E-17	3.13E-17
Chloroethane	2.19E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E-16	4.32E-23	8.79E-17	2.23E-14
Chloroform	1.07E-13	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	1.07E-13
Dibenzofuran	1.93E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-16	4.94E-20	7.73E-17	1.96E-14
Dichlorobenzenes (total)	2.49E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	2.49E-15
1,4-Dichlorobenzene	1.57E-16	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	1.57E-16
1,1-Dichloroethane	7.11E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	7.11E-15
1,2-Dichloroethane	2.22E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-17	1.29E-22	8.89E-18	2.26E-15
1,1-Dichloroethene	3.81E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	3.81E-15
1,2-Dichloroethene	3.29E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	3.29E-15
1,2-Dichloropropane	1.41E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	1.41E-15
Dieldrin	2.20E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-19	2.44E-24	8.81E-20	2.24E-17
Dimethyldisulfide	6.05E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	6.05E-15
Hexachlorobenzene	5.82E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.84E-16	9.71E-19	2.33E-16	5.91E-14
Hydrazine	7.52E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.84E-13	7.96E-20	3.01E-13	7.64E-11
Lindane	3.02E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-19	1.07E-25	4.09E-20	1.04E-17
Malathion	3.02E-17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-19	0.00E+00	1.21E-19	3.07E-17
Methyl chloride	2.95E-15	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	2.95E-15
Methylene chloride	1.78E-13	NA	0.00E+00	NA	0.00E+00	NA	NA	NA	NA	1.78E-13
Methyl ethyl ketone	3.39E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.39E-17	0.00E+00	1.49E-17	3.79E-15
4-Methylphenol	3.39E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-17	6.13E-23	1.36E-17	3.44E-15
Monomethyl hydrazine	2.37E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-13	2.52E-20	9.49E-14	2.41E-11
Naphthalene	4.00E-16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-18	3.35E-19	1.60E-18	4.06E-16
Naphthalene carbonitrile	2.11E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.72E-18	7.72E-18	8.46E-15	2.15E-12
n-Nitrosodimethylamine	2.41E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-16	0.00E+00	9.65E-17	2.45E-14
PAHs										
Acenaphthalene	9.62E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-15	2.37E-19	3.85E-16	9.77E-14
Acenaphthene	9.62E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-15	9.18E-20	3.85E-16	9.77E-14
Benzo(a)pyrene	1.93E-13	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-15	3.17E-19	7.73E-16	1.96E-13

A	B	C	AN	AO	AP	AQ	AR	AS	AT	AU
61	Chrysene		1.93E-14	0.00E+00	0.00E+00	0.00E+00	2.27E-16	8.01E-19	7.73E-17	1.96E-14
62	Dibenzo(a,h)anthracene		1.93E-13	0.00E+00	0.00E+00	0.00E+00	2.27E-15	1.79E-16	7.73E-16	1.96E-13
63	Fluoranthene		1.93E-13	0.00E+00	0.00E+00	0.00E+00	2.27E-15	NA	7.73E-16	1.96E-13
64	Fluorene		1.93E-14	0.00E+00	0.00E+00	0.00E+00	2.27E-16	6.60E-20	7.73E-17	1.96E-14
65	Phenanthrene		7.52E-17	0.00E+00	0.00E+00	0.00E+00	8.84E-19	2.27E-19	3.01E-19	7.66E-17
66	Pyrene		3.86E-13	0.00E+00	0.00E+00	0.00E+00	5.62E-15	3.62E-18	1.55E-15	3.92E-13
67	Parathion		4.78E-17	0.00E+00	0.00E+00	0.00E+00	2.79E-16	7.17E-25	1.91E-19	4.86E-17
68	Pentachlorobenzene		2.37E-14	0.00E+00	0.00E+00	0.00E+00	2.79E-16	NA	9.49E-17	2.41E-14
69	Phenol		3.79E-16	0.00E+00	0.00E+00	0.00E+00	4.46E-18	NA	1.52E-18	3.85E-16
70	Pyridine		2.11E-12	NA	NA	NA	NA	NA	NA	2.11E-12
71	Quinoline		2.17E-14	0.00E+00	0.00E+00	0.00E+00	2.56E-16	1.43E-20	8.70E-17	2.21E-14
72	Tetrachlorobenzene		1.17E-14	0.00E+00	0.00E+00	0.00E+00	1.37E-16	NA	4.66E-17	1.18E-14
73	Tetrachloroethene		4.07E-16	NA	NA	NA	NA	NA	NA	4.07E-16
74	Toluene		6.49E-15	NA	NA	NA	NA	NA	NA	6.49E-15
75	Trichlorobenzene		5.90E-15	0.00E+00	0.00E+00	0.00E+00	6.93E-17	2.17E-20	2.36E-17	5.99E-15
76	Trichloroethene		4.34E-15	NA	NA	NA	NA	NA	NA	4.34E-15
77	Unsym. dimethyl hydrazine		9.35E-11	0.00E+00	0.00E+00	0.00E+00	1.10E-12	9.92E-20	3.74E-13	9.50E-11
78	Vapona		1.89E-16	0.00E+00	0.00E+00	0.00E+00	2.22E-18	4.78E-25	7.57E-19	1.92E-16
79	Vinyl acetate		2.68E-15	NA	NA	NA	NA	NA	NA	2.68E-15
80	Vinyl chloride		2.49E-15	NA	NA	NA	NA	NA	NA	2.49E-15
81	Xylenes (total)		4.63E-16	NA	NA	NA	NA	NA	NA	4.63E-16
82										
83	INORGANICS									
84	Arsenic		2.87E-12	0.00E+00	0.00E+00	0.00E+00	3.38E-14	1.10E-14	1.15E-15	2.92E-12
85	Cadmium		2.10E-14	0.00E+00	0.00E+00	0.00E+00	2.47E-16	NA	8.41E-18	2.13E-14
86	Chromium (III)		8.51E-14	NA	NA	NA	NA	NA	NA	8.51E-14
87	Chromium (VI)		2.99E-15	NA	NA	NA	NA	NA	NA	2.99E-15
88	Copper		2.15E-13	NA	NA	NA	NA	2.64E-15	NA	2.17E-13
89	Iron		6.56E-09	NA	NA	NA	NA	NA	NA	6.56E-09
90	Lead		1.10E-13	NA	NA	NA	NA	NA	NA	1.10E-13
91	Mercury		1.37E-13	0.00E+00	0.00E+00	0.00E+00	1.61E-15	NA	5.48E-17	1.39E-13
92	Selenium		3.53E-13	NA	NA	NA	NA	NA	NA	3.53E-13
93	Silver		2.19E-15	NA	NA	NA	NA	NA	NA	2.19E-15
94	Zinc		9.69E-13	NA	NA	NA	NA	5.84E-15	NA	9.75E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 Kg
um 1000 ug/mg

Inhalation dose = Cair *br/bw/ugmg

BE	(TOTAL	(/Kg/day)
8.54E-15		
7.85E-12		
3.29E-12		
1.12E-17		
4.41E-13		
2.73E-15		
2.01E-13		
2.49E-15		
9.77E-13		
9.84E-14		
2.15E-12		
9.15E-16		
9.69E-13		
5.40E-16		
4.41E-15		
1.12E-14		
2.53E-16		
5.97E-16		
5.22E-16		
3.13E-17		
2.23E-14		
1.07E-13		
1.96E-14		
2.49E-15		
1.57E-16		
7.11E-15		
2.26E-15		
3.81E-15		
3.29E-15		
1.41E-17		
2.24E-17		
5.05E-15		
5.91E-14		
7.64E-11		
1.04E-17		
3.07E-17		
5.95E-15		
1.78E-13		
5.79E-15		
5.44E-15		
2.41E-11		
4.06E-16		
2.15E-12		
2.45E-14		
9.77E-14		
9.77E-14		
9.96E-13		

A	B	C	AX	AY	AZ	BA	BB	BC	BD	BE
2			TABLE 5							
61	Chrysene		1.93E-14	0.00E+00	0.00E+00	0.00E+00	2.30E-16	8.01E-19	7.84E-17	1.96E-14
62	Dibenzo(a,h)anthracene		1.93E-13	0.00E+00	0.00E+00	0.00E+00	2.30E-15	1.79E-16	7.84E-16	1.96E-13
63	Fluoranthene		1.93E-13	0.00E+00	0.00E+00	0.00E+00	2.30E-15	NA	7.84E-16	1.96E-13
64	Fluorene		1.93E-14	0.00E+00	0.00E+00	0.00E+00	2.30E-16	6.60E-20	7.84E-17	1.96E-14
65	Phenanthrene		7.52E-17	0.00E+00	0.00E+00	0.00E+00	8.97E-19	2.27E-19	3.05E-19	7.66E-17
66	Pyrene		3.88E-13	0.00E+00	0.00E+00	0.00E+00	8.97E-19	3.62E-18	1.57E-15	3.92E-13
67	Parathion		4.78E-17	0.00E+00	0.00E+00	0.00E+00	5.70E-19	7.17E-25	1.94E-19	4.86E-17
68	Pentachlorobenzene		2.37E-14	0.00E+00	0.00E+00	0.00E+00	2.83E-16	NA	9.63E-17	2.41E-14
69	Phenol		3.79E-16	0.00E+00	0.00E+00	0.00E+00	4.52E-18	NA	1.54E-18	3.85E-16
70	Pyridine		2.11E-12	NA	NA	NA	NA	NA	NA	2.11E-12
71	Quinoline		2.17E-14	0.00E+00	0.00E+00	0.00E+00	2.59E-16	1.43E-20	8.83E-17	2.21E-14
72	Tetrachlorobenzene		1.17E-14	0.00E+00	0.00E+00	0.00E+00	1.39E-16	NA	4.73E-17	1.18E-14
73	Tetrachloroethene		4.07E-16	NA	NA	NA	NA	NA	NA	4.07E-16
74	Toluene		6.49E-15	NA	NA	NA	NA	NA	NA	6.49E-15
75	Trichlorobenzene		5.90E-15	0.00E+00	0.00E+00	0.00E+00	7.04E-17	2.17E-20	2.40E-17	5.99E-15
76	Trichloroethene		4.34E-15	NA	NA	NA	NA	NA	NA	4.34E-15
77	Unsym. dimethyl hydrazine		9.35E-11	0.00E+00	0.00E+00	0.00E+00	1.11E-12	9.92E-20	3.80E-13	9.50E-11
78	Vapona		1.89E-16	0.00E+00	0.00E+00	0.00E+00	2.25E-18	4.78E-25	7.67E-19	1.92E-16
79	Vinyl acetate		2.68E-15	NA	NA	NA	NA	NA	NA	2.68E-15
80	Vinyl chloride		2.49E-15	NA	NA	NA	NA	NA	NA	2.49E-15
81	Xylenes (total)		4.63E-16	NA	NA	NA	NA	NA	NA	4.63E-16
82										
83	INORGANICS									
84	Arsenic		2.87E-12	0.00E+00	0.00E+00	0.00E+00	3.42E-14	1.10E-14	1.17E-15	2.92E-12
85	Cadmium		2.10E-14	0.00E+00	0.00E+00	0.00E+00	2.50E-16	NA	8.53E-18	2.13E-14
86	Chromium (III)		8.51E-14	NA	NA	NA	NA	NA	NA	8.51E-14
87	Chromium (VI)		2.99E-15	NA	NA	NA	NA	NA	NA	2.99E-15
88	Copper		2.15E-13	NA	NA	NA	NA	2.64E-15	NA	2.17E-13
89	Iron		6.56E-09	NA	NA	NA	NA	NA	NA	6.56E-09
90	Lead		1.10E-13	NA	NA	NA	NA	NA	NA	1.10E-13
91	Mercury		1.37E-13	0.00E+00	0.00E+00	0.00E+00	1.63E-15	NA	5.56E-17	1.39E-13
92	Selenium		3.53E-13	NA	NA	NA	NA	NA	NA	3.53E-13
93	Silver		2.19E-15	NA	NA	NA	NA	NA	NA	2.19E-15
94	Zinc		9.69E-13	NA	NA	NA	NA	5.84E-15	NA	9.75E-13
95										
96										
97										
98										
99										
100										
101										
102										
103										

br 10 M3/day
bw 15.5 kg
um 1000 ug/mg

Inhalation dose = Cair*br/bw/ugmg

A	B	C	BH	BI	BJ
2			TABLE 6		
3			INFANT TOTAL EXPOSURE		
4					
5					
6					
7					
8					
9					
10					
11					
12	ORGANICS				
13	Acetone		5.59E-15	3.32E-17	5.62E-15
14	Acetonitrile		5.05E-12	4.33E-12	9.39E-12
15	Acrylonitrile		2.15E-12	2.27E-15	2.15E-12
16	Aldrin		7.85E-18	6.73E-18	1.46E-17
17	Aniline		2.84E-13	2.44E-13	5.28E-13
18	Atrazine		1.76E-15	1.51E-15	3.26E-15
19	Benzaldehyde		1.29E-13	1.11E-13	2.40E-13
20	Benzene		1.63E-15	6.45E-19	1.63E-15
21	Benzofuran		6.30E-13	5.40E-13	1.17E-12
22	Benzoic Acid		6.34E-14	5.44E-14	1.18E-13
23	Benzonitrile		1.38E-12	1.19E-12	2.57E-12
24	Benothiazole		5.90E-16	5.06E-16	1.10E-15
25	Biphenyl		6.34E-13	3.77E-15	6.38E-13
26	Bis(2-ethylhexyl)phthalate		3.48E-16	2.98E-16	6.46E-16
27	Carbazole		2.84E-15	2.44E-15	5.28E-15
28	Carbon Tetrachloride		8.25E-15	4.90E-17	8.30E-15
29	4-Chloroaniline		1.63E-16	1.39E-16	3.02E-16
30	Chlorobenzene		3.91E-16	2.32E-18	3.93E-16
31	4-Chlorobiphenyl		4.01E-16	3.44E-16	7.44E-16
32	4,4'-Chlorobiphenyl		2.02E-17	1.73E-17	3.75E-17
33	Chloroethane		1.44E-14	1.23E-14	2.67E-14
34	Chloroform		7.00E-14	4.16E-16	7.05E-14
35	Dibenzofuran		1.26E-14	1.08E-14	2.35E-14
36	Dichlorobenzenes (total)		1.63E-15	9.67E-18	1.64E-15
37	1,4-Dichlorobenzene		1.03E-16	6.11E-19	1.03E-16
38	1,1-Dichloroethane		4.65E-15	2.77E-17	4.68E-15
39	1,2-Dichloroethane		1.45E-15	1.25E-15	2.70E-15
40	1,1-Dichloroethene		2.49E-15	1.48E-17	2.51E-15
41	1,2-Dichloroethene		2.15E-15	1.28E-17	2.17E-15
42	1,2-Dichloropropane		9.22E-16	5.48E-18	9.28E-16
43	Dieldrin		1.44E-17	1.24E-17	2.68E-17
44	Dimethyldisulfide		3.96E-15	2.35E-17	3.98E-15
45	Hexachlorobenzene		3.81E-14	7.36E-15	4.54E-14
46	Hydrazine		4.92E-11	4.22E-11	9.14E-11
47	Lindane		6.69E-18	5.74E-18	1.24E-17
48	Malathion		1.98E-17	1.70E-17	3.67E-17
49	Methyl chloride		1.93E-15	1.15E-17	1.94E-15
50	Methylene chloride		1.17E-13	6.93E-16	1.17E-13
51	Methyl ethyl ketone		2.44E-15	2.09E-15	4.54E-15
52	4-Methylphenol		2.22E-15	1.90E-15	4.12E-15
53	Monomethyl hydrazine		1.55E-11	1.33E-11	2.88E-11
54	Naphthalene		2.62E-16	2.24E-16	4.86E-16
55	Naphthalene carbonitrile		1.38E-12	1.19E-12	2.57E-12
56	n-Nitrosodimethylamine		1.58E-14	1.35E-14	2.93E-14
57	PAHS				
58	Acenaphthalene		6.30E-14	5.40E-14	1.17E-13
59	Acenaphthene		6.30E-14	5.40E-14	1.17E-13
60	Benzo(a)pyrene		1.26E-13	1.08E-13	2.35E-13

18-Jun-91
16:55:55
WORKER

-----MAXIMUM-----

SENSITIVITY CASE

A	B	C	BH	BI	BJ
2			TABLE 6		
61	Chrysene		1.26E-14	1.08E-14	2.35E-14
62	Dibenzo(a,h)anthracene		1.26E-13	1.08E-13	2.35E-13
63	Fluoranthene		1.26E-13	1.08E-13	2.35E-13
64	Fluorene		1.26E-14	1.08E-14	2.35E-14
65	Phenanthrene		4.92E-17	4.22E-17	9.14E-17
66	Pyrene		2.53E-13	2.17E-13	4.69E-13
67	Parathion		3.13E-17	2.68E-17	5.81E-17
68	Pentachlorobenzene		1.55E-14	3.00E-15	1.85E-14
69	Phenol		2.48E-16	2.13E-16	4.61E-16
70	Pyridine		1.39E-12	8.22E-15	1.39E-12
71	Quinoline		1.42E-14	1.22E-14	2.64E-14
72	Tetrachlorobenzene		7.63E-15	1.47E-15	9.10E-15
73	Tetrachloroethene		2.66E-16	1.58E-18	2.68E-16
74	Toluene		4.25E-15	4.21E-18	4.25E-15
75	Trichlorobenzene		3.86E-15	7.47E-16	4.61E-15
76	Trichloroethene		2.84E-15	1.69E-17	2.86E-15
77	Unsym. dimethyl hydrazine		6.12E-11	5.25E-11	1.14E-10
78	Vapona		1.24E-16	1.06E-16	2.30E-16
79	Vinyl acetate		1.76E-15	1.04E-17	1.77E-15
80	Vinyl chloride		1.63E-15	9.67E-18	1.64E-15
81	Xylenes (total)		3.03E-16	6.01E-20	3.03E-16
82					
83	INORGANICS				
84	Arsenic		1.88E-12	NE	1.88E-12
85	Cadmium		1.37E-14	NE	1.37E-14
86	Chromium (III)		5.57E-14	NE	5.57E-14
87	Chromium (VI)		1.96E-15	NE	1.96E-15
88	Copper		1.41E-13	NE	1.41E-13
89	Iron		4.29E-09	NE	4.29E-09
90	Lead		7.23E-14	NE	7.23E-14
91	Mercury		8.96E-14	NE	8.96E-14
92	Selenium		2.31E-13	NE	2.31E-13
93	Silver		1.44E-15	NE	1.44E-15
94	Zinc		6.34E-13	NE	6.34E-13
95					
96					
97					
98					
99					
100					
101					
102					
103					

br 3.80E+00 M3/day
 bw 9.00E+00 Kg
 um 1.00E+03 ug/mg

Inhalation dose = Cair *br/bw/ugmg

A	B	C	D	E	F	G
98						
99						
100						
101						
102						
103	WORKER					
104	SENSITIVITY CASE					
105						
106						
107						
108	ORGANICS					
109	Acrylonitrile		2.40E-01	5.40E-01	NC	
110	Aldrin		1.70E+01	1.70E+01	3.40E+01	
111	Aniline		5.70E-03	5.70E-03	1.14E-02	
112	Benzene		2.90E-02	2.90E-02	NC	
113	Bis(2-ethylhexyl)phthalate		1.40E-02	1.40E-02	2.80E-02	
114	Carbazole		2.00E-02	2.00E-02	4.00E-02	
115	Carbon Tetrachloride		1.30E-01	1.30E-01	NC	
116	Chloroform		8.10E-02	6.10E-03	NC	
117	1,4-Dichlorobenzene		2.40E-02	2.40E-02	NC	
118	1,1-Dichloroethane					
119	1,2-Dichloroethane		9.10E-02	9.10E-02	1.82E-01	
120	1,2-Dichloropropane		1.20E+00	6.00E-01	NC	
121	Dieldrin		6.80E-02	6.80E-02	NC	
122	Hexachlorobenzene		1.60E+01	1.60E+01	3.20E+01	
123	Hydrazine		1.60E+00	1.60E+00	3.20E+00	
124	Lindane		1.71E+01	3.00E+00	6.00E+00	
125	Methyl chloride		1.30E+00	1.30E+00	2.60E+00	
126	Methylene chloride		6.30E-03	1.30E-02	NC	
127	4-Methylphenol		1.40E-02	7.50E-03	NC	
128	Monomethyl hydrazine		1.10E+00	1.10E+00	2.20E+00	
129	n-Nitrosodimethylamine		5.10E+01	5.10E+01	1.02E+02	
130	PAHs					
131	Benzo(a)pyrene					
132	Chrysene		6.10E+00	1.15E+01	2.30E+01	
133	Dibenzo(a,h)anthracene		6.10E+00	1.15E+01	2.30E+01	
134	Parathion					
135	Quinoline		1.20E+01	1.20E+01	2.40E+01	
136	Tetrachloroethene		3.30E-03	5.10E-02	NC	
137	Trichloroethene		1.10E-02	1.10E-02	NC	
138	Vapona		2.90E-01	2.90E-01	5.80E-01	
139	Vinyl chloride		2.93E-01	2.30E+00	NC	
140						
141						
142	INORGANICS					
143	Arsenic		1.50E+01	1.75E+00	3.50E+01	
144	Cadmium		6.10E+00	NC	NC	
145	Chromium (VI)		4.10E+01	NC	NC	
146						
147	Total					
148						
149						
150						
151						
152						
153						

AED Adult Exposure Duration	CED Child Exposure Duration	CID Child Inhalation Duration	IED Infant Exposure Duration	IID Infant Inhalation Duration
64	5	1	1	1

A B C

TABLE 7
WORKER CARCINOGENIC RISK

103 WORKER	104 SENSITIVITY CASE	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150								
					ORGANICS	Acrylonitrile	Aldrin	Aniline	Benzene	Bis(2-ethylhexyl)phthalate	Carbazole	Carbon Tetrachloride	Chloroform	1,4-Dichlorobenzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	1,2-Dichloropropane	Dieldrin	Hexachlorobenzene	Hydrazine	Lindane	Methyl chloride	Methylene chloride	4-Methylphenol	Monomethyl hydrazine	n-Nitrosodimethylamine	PAHs	Benzo(a)pyrene	Chrysene	Dibenzo(a,h)anthracene	Parathion	Quinoline	Tetrachloroethene	Trichloroethene	Vapona	Vinyl chloride	INORGANICS	Arsenic	Cadmium	Chromium (VI)	Total													
						3.42E-15	8.83E-19	1.07E-17	3.12E-19	3.23E-20	3.76E-19	7.10E-18	3.76E-17	1.63E-20	NE	8.76E-19	1.98E-17	4.15E-19	1.53E-18	4.03E-16	5.57E-12	5.76E-20	8.06E-20	1.08E-17	NE	1.13E-13	5.33E-15	5.10E-15	5.10E-16	5.10E-15	NE	1.13E-15	5.82E-21	2.07E-19	2.38E-19	3.18E-18		1.87E-13	5.55E-16	5.32E-16	5.89E-12														
						7.01E-20	8.51E-19	NA	2.56E-21	2.99E-20	NA	NA	NA	NE	6.95E-20	NA	NA	1.21E-19	3.20E-17	7.75E-14	4.57E-21	NA	NA	NE	8.97E-15	4.23E-16	7.63E-16	7.63E-17	7.63E-16	NE	8.97E-17	NA	NA	1.88E-20	NA		1.73E-15	NA	NA	NA	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18						
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA		7.19E-15	NA	NA	NA	6.36E-12														
						3.42E-15	1.24E-18	1.51E-17	3.12E-19	4.55E-20	5.30E-19	7.10E-18	3.76E-17	1.63E-20	NE	1.23E-18	1.98E-17	4.15E-19	2.15E-18	5.69E-16	5.97E-12	8.12E-20	8.06E-20	1.08E-17	NE	1.59E-13	7.51E-15	9.04E-15	9.04E-16	9.04E-15	NE	1.59E-15	5.82E-21	2.07E-19	3.35E-19	3.18E-18		1.96E-13	5.55E-16	5.32E-16	6.36E-12														
						2.91E-19	3.54E-18	NA	1.06E-20	1.24E-19	NA	NA	NA	NE	2.89E-19	NA	NA	5.04E-19	1.33E-16	3.23E-13	1.90E-20	NA	NA	NE	3.73E-14	1.76E-15	3.18E-15	3.18E-16	3.18E-15	NE	3.73E-16	NA	NA	7.84E-20	NA																				

TABLE B
REFERENCE DOSES FOR NONCARCINOGENIC
EFFECTS (mg/kg-day)

B	C	D	E	F
		Inhalation RfD	Oral RfD	Dermal RfD
155	WORKER			
156	SENSITIVITY CASE			
157				
158				
159				
160				
161				
162				
163				
164				
165	ORGANICS			
166	Acetone	1.82E+00	1.00E-01	NC
167	Acetonitrile	1.00E-02	6.00E-02	3.00E-02
168	Acrylonitrile	4.39E-03	2.70E-04	NC
169	Aldrin	2.55E-04	3.00E-05	1.50E-05
170	Aniline	7.76E-03	1.95E-03	9.75E-04
171	Atrazine	5.10E-03	5.00E-03	2.50E-03
172	Benzaldehyde	1.00E-01	1.00E-01	5.00E-02
173	Benzene	3.26E-02	1.00E-03	NC
174	Benzofuran	5.00E-03	5.00E-03	2.50E-03
175	Benzic Acid	4.00E+00	4.00E+00	2.00E+00
176	Benzonitrile	8.00E-03	8.00E-03	4.00E-03
177	Benzothiazole	1.00E-03	1.00E-03	5.00E-04
178	Biphenyl	1.33E-03	5.00E-02	NC
179	Bis(2-ethylhexyl)phthalate	5.10E-03	4.00E-03	1.00E-02
180	Carbazole	5.00E-03	5.00E-03	2.50E-03
181	Carbon Tetrachloride	3.16E-02	7.00E-04	NC
182	4-Chloroaniline	4.00E-03	4.00E-03	2.00E-03
183	Chlorobenzene	5.00E-03	2.00E-02	NC
184	4-Chlorobiphenyl	2.45E-02	2.45E-02	1.22E-02
185	4,4'-Chlorobiphenyl	2.33E-02	2.33E-02	1.16E-02
186	Chloroethane	2.65E+00	NA	NC
187	Chloroform	5.00E-02	1.00E-02	NC
188	Dibenzofuran	NA	NA	NA
189	Dichlorobenzenes (total)	4.00E-02	9.00E-02	NC
190	1,1-Dichloroethane	1.00E-01	1.00E-01	NC
191	1,2-Dichloroethane	4.08E-02	4.89E-03	2.45E-03
192	1,1-Dichloroethene	2.04E-02	9.00E-03	NC
193	1,2-Dichloroethene	8.10E-01	2.00E-02	NC
194	1,2-Dichloropropane	3.54E-01	8.60E-03	NC
195	Dieldrin	2.55E-04	5.00E-05	2.50E-05
196	Dimethyldisulfide	8.10E-03	8.10E-03	NC
197	Hexachlorobenzene	1.33E-04	6.00E-04	4.00E-04
198	Hydrazine	5.10E-04	3.00E-04	3.00E-04
199	Lindane	1.02E-02	2.00E-02	1.50E-04
200	Malathion	1.05E-01	1.80E-02	1.00E-02
201	Methyl chloride	8.57E-01	6.00E-02	NC
202	Methylene chloride	9.00E-02	5.00E-01	2.50E-01
203	Methyl ethyl ketone	1.02E-02	5.00E-02	2.50E-02
204	4-Methylphenol	1.94E-05	2.20E-04	1.10E-04
205	Monomethyl hydrazine	5.10E-02	4.00E-03	2.00E-03
206	Naphthalene	5.10E-02	4.00E-03	2.00E-03
207	Naphthalene carbonitrile	5.10E-02	4.00E-03	2.00E-03
208	n-Nitrosodimethylamine	2.80E-04	2.80E-04	1.40E-04
209	PAHs			
210	Acenaphthalene	6.00E-02	6.00E-02	3.00E-02
211	Acenaphthene	6.00E-02	6.00E-02	3.00E-02
212	Benzo(a)pyrene	3.00E-02	3.00E-02	1.50E-02
213	Chrysene	3.00E-02	3.00E-02	1.50E-02
214				

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

B	C	D	E	F
155		TABLE 8		
156				
215	Dibenzo(a,h)anthracene	3.00E-02	3.00E-02	1.50E-02
216	Fluoranthene	4.00E-02	4.00E-02	2.00E-02
217	Fluorene	4.00E-02	4.00E-02	2.00E-02
218	Phenanthrene	3.00E-02	3.00E-02	1.50E-02
219	Pyrene	3.00E-02	3.00E-02	1.50E-02
220	Parathion	5.10E-05	6.00E-03	3.00E-03
221	Pentachlorobenzene	8.00E-04	8.00E-04	4.00E-04
222	Phenol	1.94E-02	6.00E-01	3.00E-01
223	Pyridine	1.63E-02	1.00E-03	NC
224	Quinoline	2.00E-01	2.00E-01	1.00E-01
225	Tetrachlorobenzene	3.00E-04	3.00E-04	1.50E-04
226	Tetrachloroethene	3.46E-01	1.00E-02	NC
227	Toluene	5.71E-01	2.00E-01	NC
228	Trichlorobenzene	3.00E-03	2.00E-02	1.00E-02
229	Trichloroethene	2.74E-01	7.35E-03	NC
230	Unsym. dimethyl hydrazine	1.22E-03	1.22E-03	6.10E-04
231	Vapona	8.00E-04	8.00E-04	4.00E-04
232	Vinyl acetate	2.00E-01	1.00E+00	NC
233	Vinyl chloride	1.33E-02	1.30E-03	NC
234	Xylenes (total)	8.57E-02	2.00E+00	NC
235				
236	INORGANICS			
237	Arsenic	2.04E-04	1.00E-03	5.00E-05
238	Cadmium	5.10E-05	1.00E-03	5.00E-05
239	Chromium (III)	5.10E-04	NC	NC
240	Chromium (VI)	5.10E-05	NC	NC
241	Copper	1.00E-02	3.80E-02	NC
242	Iron	1.02E-03	NC	NC
243	Mercury	8.57E-05	3.00E-04	1.50E-05
244	Selenium	2.04E-04	NC	NC
245	Silver	1.02E-05	NC	NC
246	Zinc	8.19E-03	2.00E-01	NC

ROCKY MOUNTAIN ARSENAL - 18-Jun-91

TABLE 9 ADULT HAZARD INDEX										
B	C	H	I	J	K	L	M	N	O	
		INHALATION HAZARD QUOTIENT	VEGETABLE INGESTION HAZARD QUOTIENT	MILK INGESTION HAZARD QUOTIENT	BEEF INGESTION HAZARD QUOTIENT	SOIL/DUST INGESTION HAZARD QUOTIENT	FISH INGESTION HAZARD QUOTIENT	DERMAL EXPOSURE HAZARD QUOTIENT	TOTAL ADULT HAZARD INDEX	
155	WORKER	7.11E-16	NA	NA	NA	NA	NA	NA	7.11E-16	
156	SENSITIVITY CASE	1.17E-10	0.00E+00	0.00E+00	0.00E+00	1.05E-13	0.00E+00	4.36E-13	1.18E-10	
157		1.14E-10	NA	NA	NA	NA	NA	NA	1.14E-10	
158		7.13E-15	0.00E+00	0.00E+00	0.00E+00	3.25E-16	0.00E+00	1.35E-15	8.81E-15	
159		8.49E-12	0.00E+00	0.00E+00	0.00E+00	1.81E-13	0.00E+00	7.54E-13	9.42E-12	
160		7.98E-14	0.00E+00	0.00E+00	0.00E+00	4.37E-16	0.00E+00	1.82E-15	8.20E-14	
161		3.00E-13	0.00E+00	0.00E+00	0.00E+00	1.61E-15	0.00E+00	6.70E-15	3.08E-13	
162		1.16E-14	NA	NA	NA	NA	NA	NA	1.16E-14	
163		2.92E-11	0.00E+00	0.00E+00	0.00E+00	1.57E-13	0.00E+00	6.51E-13	3.00E-11	
164		3.67E-15	0.00E+00	0.00E+00	0.00E+00	1.97E-17	0.00E+00	8.20E-17	3.77E-15	
165		4.01E-11	0.00E+00	0.00E+00	0.00E+00	2.15E-13	0.00E+00	8.94E-13	4.12E-11	
166	ORGANICS	1.37E-13	0.00E+00	0.00E+00	0.00E+00	7.33E-16	0.00E+00	3.05E-15	1.40E-13	
167	Acetone	1.10E-10	NA	NA	NA	NA	NA	NA	1.10E-10	
168	Acetonitrile	1.58E-14	0.00E+00	0.00E+00	0.00E+00	1.08E-16	0.00E+00	9.00E-17	1.60E-14	
169	Acrylonitrile	1.32E-13	0.00E+00	0.00E+00	0.00E+00	7.07E-16	0.00E+00	2.94E-15	1.35E-13	
170	Aldrin	6.05E-14	NA	NA	NA	NA	NA	NA	6.05E-14	
171	Aniline	9.43E-15	0.00E+00	0.00E+00	0.00E+00	5.06E-17	0.00E+00	2.10E-16	9.69E-15	
172	Atrazine	1.81E-14	NA	NA	NA	NA	NA	NA	1.81E-14	
173	Benzaldehyde	3.79E-15	0.00E+00	0.00E+00	0.00E+00	2.03E-17	0.00E+00	8.50E-17	3.90E-15	
174	Benzene	2.01E-16	0.00E+00	0.00E+00	0.00E+00	1.08E-18	0.00E+00	4.50E-18	2.06E-16	
175	Benzofuran	1.26E-15	NE	NE	NE	NE	NE	NE	1.26E-15	
176	Benzoic Acid	3.25E-13	NA	NA	NA	NA	NA	NA	3.25E-13	
177	Benzonitrile	NE	NE	NE	NE	NE	NE	NE	NE	
178	Benothiazole	9.43E-15	0.00E+00	0.00E+00	0.00E+00	5.06E-17	0.00E+00	2.10E-16	9.69E-15	
179	Biphenyl	1.81E-14	NA	NA	NA	NA	NA	NA	1.81E-14	
180	Bis(2-ethylhexyl)phthalate	3.79E-15	0.00E+00	0.00E+00	0.00E+00	2.03E-17	0.00E+00	8.50E-17	3.90E-15	
181	Carbazole	2.01E-16	0.00E+00	0.00E+00	0.00E+00	1.08E-18	0.00E+00	4.50E-18	2.06E-16	
182	Carbon Tetrachloride	1.26E-15	NE	NE	NE	NE	NE	NE	1.26E-15	
183	4-Chloroaniline	3.25E-13	NA	NA	NA	NA	NA	NA	3.25E-13	
184	Chlorobenzene	NE	NE	NE	NE	NE	NE	NE	NE	
185	4-Chlorobiphenyl	9.43E-15	0.00E+00	0.00E+00	0.00E+00	5.06E-17	0.00E+00	2.10E-16	9.69E-15	
186	4,4'-Chlorobiphenyl	1.81E-14	NA	NA	NA	NA	NA	NA	1.81E-14	
187	Chloroethane	3.79E-15	0.00E+00	0.00E+00	0.00E+00	2.03E-17	0.00E+00	8.50E-17	3.90E-15	
188	Chloroform	2.01E-16	0.00E+00	0.00E+00	0.00E+00	1.08E-18	0.00E+00	4.50E-18	2.06E-16	
189	Dibenzofuran	1.26E-15	NE	NE	NE	NE	NE	NE	1.26E-15	
190	Dichlorobenzenes (total)	3.25E-13	NA	NA	NA	NA	NA	NA	3.25E-13	
191	1,1-Dichloroethane	9.43E-15	0.00E+00	0.00E+00	0.00E+00	5.06E-17	0.00E+00	2.10E-16	9.69E-15	
192	1,2-Dichloroethane	1.81E-14	NA	NA	NA	NA	NA	NA	1.81E-14	
193	1,1-Dichloroethene	8.26E-15	0.00E+00	0.00E+00	0.00E+00	2.03E-17	0.00E+00	8.50E-17	3.90E-15	
194	1,2-Dichloroethene	2.83E-14	NA	NA	NA	NA	NA	NA	2.83E-14	
195	1,2-Dichloropropane	6.16E-16	NA	NA	NA	NA	NA	NA	6.16E-16	
196	Dieldrin	6.04E-16	NA	NA	NA	NA	NA	NA	6.04E-16	
197	Dimethyldisulfide	1.31E-14	0.00E+00	0.00E+00	0.00E+00	3.58E-16	0.00E+00	1.49E-15	1.49E-14	
198	Hexachlorobenzene	1.13E-13	NA	NA	NA	NA	NA	NA	1.13E-13	
199	Hydrazine	1.10E-11	0.00E+00	0.00E+00	0.00E+00	5.92E-14	0.00E+00	2.46E-13	1.13E-11	
200	Landane	8.57E-08	0.00E+00	0.00E+00	0.00E+00	1.02E-10	0.00E+00	4.24E-10	8.63E-08	
201	Malathion	3.04E-15	0.00E+00	0.00E+00	0.00E+00	2.77E-17	0.00E+00	1.15E-16	3.19E-15	
202	Methyl chloride	4.49E-16	0.00E+00	0.00E+00	0.00E+00	1.23E-18	0.00E+00	5.11E-18	4.56E-16	
203	Methylene chloride	4.27E-15	NA	NA	NA	NA	NA	NA	4.27E-15	
204	Methyl ethyl ketone	3.15E-14	NA	NA	NA	NA	NA	NA	3.15E-14	
205	4-Methylphenol	6.29E-15	0.00E+00	0.00E+00	0.00E+00	6.07E-18	0.00E+00	2.53E-17	6.32E-15	
206	Monomethyl hydrazine	5.04E-14	0.00E+00	0.00E+00	0.00E+00	5.51E-17	0.00E+00	2.29E-16	5.06E-14	
207	Naphthalene	1.85E-07	0.00E+00	0.00E+00	0.00E+00	8.77E-11	0.00E+00	3.65E-10	1.86E-07	
208	Naphthalene carbonitrile	1.19E-15	0.00E+00	0.00E+00	0.00E+00	8.13E-17	0.00E+00	3.38E-16	1.61E-15	
209	n-Nitrosodimethylamine	6.29E-12	0.00E+00	0.00E+00	0.00E+00	4.30E-13	0.00E+00	1.79E-12	8.50E-12	
210	PAHS	1.31E-11	0.00E+00	0.00E+00	0.00E+00	7.01E-14	0.00E+00	2.92E-13	1.34E-11	
211	Acenaphthalene	2.43E-13	0.00E+00	0.00E+00	0.00E+00	1.30E-15	0.00E+00	5.43E-15	2.50E-13	
212	Acenaphthene	2.43E-13	0.00E+00	0.00E+00	0.00E+00	1.30E-15	0.00E+00	5.43E-15	2.50E-13	
213	Benzo(a)pyrene	9.76E-13	0.00E+00	0.00E+00	0.00E+00	5.24E-15	0.00E+00	2.18E-14	1.00E-12	
214	Chrysene	9.76E-14	0.00E+00	0.00E+00	0.00E+00	5.24E-16	0.00E+00	2.18E-15	1.00E-13	

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

TABLE 9										
B	C	H	I	J	K	L	M	N	O	
155										
156										
215	Dibenzo(a,h)anthracene	9.76E-13	0.00E+00	0.00E+00	0.00E+00	5.24E-15	0.00E+00	2.18E-14	1.00E-12	
216	Fluoranthene	7.32E-13	0.00E+00	0.00E+00	0.00E+00	3.93E-15	NA	1.63E-14	7.52E-13	
217	Fluorene	7.32E-14	0.00E+00	0.00E+00	0.00E+00	3.93E-16	0.00E+00	1.63E-15	7.52E-14	
218	Phenanthrene	3.80E-16	0.00E+00	0.00E+00	0.00E+00	2.04E-18	0.00E+00	8.48E-18	3.91E-16	
219	Pyrene	1.95E-12	0.00E+00	0.00E+00	0.00E+00	1.05E-14	0.00E+00	4.36E-14	2.01E-12	
220	Parathion	1.42E-13	0.00E+00	0.00E+00	0.00E+00	6.49E-18	0.00E+00	2.70E-17	1.42E-13	
221	Pentachlorobenzene	4.49E-12	0.00E+00	0.00E+00	0.00E+00	2.41E-14	NA	1.00E-13	4.62E-12	
222	Phenol	2.97E-15	0.00E+00	0.00E+00	0.00E+00	5.14E-19	NA	2.14E-18	2.97E-15	
223	Pyridine	1.97E-11	NA	NA	NA	NA	NA	NA	1.97E-11	
224	Quinoline	1.65E-14	0.00E+00	0.00E+00	0.00E+00	8.85E-17	0.00E+00	3.68E-16	1.69E-14	
225	Tetrachlorobenzene	5.89E-12	0.00E+00	0.00E+00	0.00E+00	3.16E-14	NA	1.31E-13	6.05E-12	
226	Tetrachloroethene	1.78E-16	NA	NA	NA	NA	NA	NA	1.78E-16	
227	Toluene	1.72E-15	NA	NA	NA	NA	NA	NA	1.72E-15	
228	Trichlorobenzene	2.98E-13	0.00E+00	0.00E+00	0.00E+00	2.40E-16	0.00E+00	9.99E-16	3.00E-13	
229	Trichloroethene	2.40E-15	NA	NA	NA	NA	NA	NA	2.40E-15	
230	Unsym. dimethyl hydrazine	1.16E-08	0.00E+00	0.00E+00	0.00E+00	6.24E-11	0.00E+00	2.59E-10	1.19E-08	
231	Vapona	3.58E-14	0.00E+00	0.00E+00	0.00E+00	1.92E-16	0.00E+00	8.00E-16	3.68E-14	
232	Vinyl acetate	2.03E-15	NA	NA	NA	NA	NA	NA	2.03E-15	
233	Vinyl chloride	2.83E-14	NA	NA	NA	NA	NA	NA	2.83E-14	
234	Xylenes (total)	8.20E-16	NA	NA	NA	NA	NA	NA	8.20E-16	
235										
236	INORGANICS									
237	Arsenic	2.14E-09	0.00E+00	0.00E+00	0.00E+00	2.34E-12	0.00E+00	9.72E-12	2.15E-09	
238	Cadmium	6.24E-11	0.00E+00	0.00E+00	0.00E+00	1.71E-14	NA	7.11E-14	6.25E-11	
239	Chromium (III)	2.53E-11	NA	NA	NA	NA	NA	NA	2.53E-11	
240	Chromium (VI)	8.90E-12	NA	NA	NA	NA	0.00E+00	NA	8.90E-12	
241	Copper	3.26E-12	NA	NA	NA	NA	NA	NA	3.26E-12	
242	Iron	9.75E-07	NA	NA	NA	NA	NA	NA	9.75E-07	
243	Mercury	2.42E-10	0.00E+00	0.00E+00	0.00E+00	3.71E-13	NA	1.54E-12	2.44E-10	
244	Selenium	2.62E-10	NA	NA	NA	NA	NA	NA	2.62E-10	
245	Silver	3.26E-11	NA	NA	NA	NA	NA	NA	3.26E-11	
246	Zinc	1.79E-11	NA	NA	NA	NA	0.00E+00	NA	1.79E-11	
247										
248	Total (Hazard Index)	1.26E-06	0.00E+00	0.00E+00	0.00E+00	2.56E-10	0.00E+00	1.07E-09	1.26E-06	

ROCKY MOUNTAIN ARSENAL - 18-Jun-91 - HYDRAZINE WASTE STREAM

A	B	C	F
253	TABLE 10		
254	CARCINOGENIC RISK		
255	CONTRIBUTION BY PATHWAY		
256			
257	WORKER		
258	SENSITIVITY CASE		
259			
260	Adult		92.6666
261	Inhalation		
262			
263	Ingestion		1.4212
264	Vegetables		NA
265	Milk		NA
266	Beef		NA
267	Soil\Dust		1.4212
268	Fish		NA
269			
270	Dermal		5.9122
271			
272	Child		
273	Inhalation		NA
274			
275	Ingestion		NA
276	Vegetables		NA
277	Milk		NA
278	Beef		NA
279	Soil\Dust		NA
280	Fish		NA
281			
282	Dermal		NA
283			
284	Infant		
285	Inhalation		NA
286			
287	Breast Milk Ingestion		NA
288			
290	Total		100.0000

9.5 HYDRAZINE WASTE STREAM AND EMISSION DOCUMENTATION

TABLE 9.5-1

ORGANIC COMPOSITION OF HYDRAZINE RINSEWATER IN TANKS & SUMP

Compounds	Concentration Ranges (µg/l)			In-ground Sump	Sum of the Average Maximums (tons/yr)
	Tank US-3	Tank US-4			
Volatiles					
1,1-Dichloroethane	108 , <240 ,	109 , <300 ,	3.66 , <5.00 ,	<1.53 , <1.53 ,	2.92E-05 6.23E-05
1,1-Dichloroethene	66 , <26 ,	<35 , 37.5 ,	<12.4 , <5.00 ,	<12.4 , <1.41 ,	1.56E-05 2.82E-05
1,2-Dichloroethane	66 , <26 ,	<35 , 37.5 ,	<12.4 , <5.00 ,	<1.41 , <1.34 ,	9.11E-06 1.71E-05
1,2-Dichloropropane	26 , <40 ,	50.7 , 112 ,	<1.34 , <5.00 ,	<2.60 , <1.34 ,	5.79E-06 1.14E-05
Acetone	92 , <106 ,	53.0 , 41.6 ,	22.2 , <5.00 ,	<2.22 , <0.830 ,	3.50E-05 6.04E-05
Benzene	92 , <106 ,	53.0 , 41.6 ,	22.2 , <5.00 ,	<2.22 , <0.830 ,	1.02E-05 1.35E-05
Chlorobenzene	320 , <320 ,	<400 , 2000 ,	2.66 , <5.00 ,	<0.530 , <0.530 ,	2.45E-06 5.82E-06
Chloroethane	320 , <320 ,	4750 , 2000 ,	16.2 , <10.0 ,	<16.2 , <16.2 ,	8.99E-05 2.25E-04
Chloroform	<108 , 9.65 ,	<135 , 45.3 ,	96.6 , 106.0 ,	<1.93 , <5.43 ,	4.38E-04 5.41E-04
Chloromethane	<108 , 9.65 ,	<135 , 45.3 ,	25.6 , 10.0 ,	<5.43 , <10.0 ,	1.21E-05 2.22E-05
Dimethyl Disulfide	<220 , 2800 ,	<275 , 4000 ,	57.0 , 110.0 ,	<1.16 , 13.3 ,	2.48E-05 2.58E-05
Methylethyl ketone	<220 , 2800 ,	<275 , 4000 ,	<10.9 , 110.0 ,	<10.9 , 110.0 ,	1.53E-05 2.58E-05
Methylene Chloride	<20.0 , <26.0 ,	<25.0 , 5.09 ,	61.0 , 89.6 ,	<22.2 , <22.2 ,	7.31E-04 1.42E-03
Tetrachlorethene	<20.0 , <26.0 ,	<25.0 , 5.09 ,	<1.01 , <5.00 ,	<1.01 , <20.0 ,	1.67E-06 3.18E-06
Toluene	<7.80 , 134 ,	<975 , 5.16 ,	<1.29 , <5.00 ,	98.8 , 115 ,	2.66E-05 5.95E-05
Trichloroethene	<7.80 , 134 ,	<975 , 5.16 ,	<3.90 , <5.00 ,	<0.390 , <7.80 ,	1.78E-05 5.22E-05
Vinyl acetate	<110 , <22.0 ,	<138 , 184 ,	<6.26 , <10.0 ,	<6.26 , <126 ,	1.10E-05 2.13E-05
Vinyl chloride	<110 , <22.0 ,	<138 , 184 ,	<5.51 , <10.0 ,	<5.51 , <110 ,	1.02E-05 1.48E-05
o-p-Xylene	<22.0 , 1200 ,	<27.5 , 1460 ,	<1.10 , <5.00 ,	<1.10 , <32.0 ,	1.90E-06 3.81E-06
Semivolatiles					
Aniline	1200 , 331 ,	1460 , 44.0 ,	1500 , 4.92 ,	<1.60 , 150 ,	1.78E-03 2.82E-03
Atrazine	274 , <1.68 ,	2.47 , <1.68 ,	4.85 , 14.9 ,	10.5 , <11.4 ,	1.10E-05 1.94E-05
Benzothiazole	274 , <1.68 ,	2.47 , <1.68 ,	3.26 , 14.9 ,	10.5 , <11.4 ,	3.69E-06 6.98E-06
4-Chloroaniline	<0.373 , <3.89 ,	<0.373 , <3.89 ,	2.94 , <0.707 ,	<1.68 , <1.68 ,	1.02E-06 1.38E-06
Malathion	<0.373 , <3.89 ,	<0.373 , <3.89 ,	<0.373 , <0.884 ,	<0.373 , 0.574 ,	1.24E-07 1.45E-07
4-Methylphenol	8.18 , <0.647 ,	8.78 , <0.647 ,	<3.89 , <0.884 ,	105 , <2.96 ,	1.39E-05 2.77E-05
Naphthalene	8.18 , <0.647 ,	8.78 , <0.647 ,	<2.96 , <0.270 ,	45.5 , <2.96 ,	1.64E-06 2.22E-06
Parathion	<0.960 , <2.30 ,	<0.960 , 1.2 ,	<0.647 , <0.478 ,	<0.647 , <0.960 ,	1.96E-07 3.70E-07
Phenanthrene	<2.30 , <0.384 ,	<2.30 , 19.1 ,	<0.960 , <1.06 ,	<0.960 , 4.12 ,	2.83E-07 6.92E-07
Phenol	<2.30 , <0.384 ,	<2.30 , 19.1 ,	<2.30 , <0.384 ,	<2.30 , <0.384 ,	9.44E-07 7.74E-07
Vapona	1.98 , <0.050 ,	2.00 , <0.050 ,	<0.384 , <1.98 ,	<0.384 , <1.98 ,	2.09E-06 4.98E-06
bis(2-Ethylhexyl)phthalate	1.98 , <0.050 ,	2.00 , <0.050 ,	<1.98 , <3.26 ,	<1.98 , 11.0 ,	2.18E-06 4.98E-06
Pesticides					
Aldrin	<0.050 , 0.139 ,	<0.050 , 0.125 ,	<0.050 , <0.100 ,	<0.050 , <0.100 ,	4.91E-08 7.95E-08
Dieldrin	<0.050 , 0.139 ,	<0.050 , 0.125 ,	<0.050 , <0.100 ,	<0.050 , <0.100 ,	9.02E-08 1.22E-07
Lindane	<0.050 , 0.139 ,	<0.050 , 0.125 ,	<0.050 , <0.100 ,	<0.050 , <0.100 ,	4.19E-08 5.79E-08
Hydrazine Fuel Compounds/NDMA					
Hydrazine	22,000 , 94,000 ,	60,000 , 90,000 ,	79,000 , 320,000 ,	2,100 , <2500 ,	3.07E-01 4.65E-01
Monomethyl hydrazine	69,000 , 610 ,	110,000 , 790 ,	1,000,000 , 120 ,	850 , 5.80 ,	9.72E-02 1.43E-01
Unsymmetrical dimethyl hydrazine	69,000 , 610 ,	110,000 , 790 ,	1,000,000 , 120 ,	350 , 1.40 ,	3.84E-01 4.71E-01
n-Nitrosodimethylamine	69,000 , 610 ,	110,000 , 790 ,	1,000,000 , 120 ,	350 , 1.40 ,	9.88E-05 1.33E-04
Total Capacity, gallons	50,000	2	200,000	40,000	2
Assumed Incineration Period, years	2	2	2	2	2

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TABLE 9.5-2
ORGANIC EMISSION RATES FROM INCINERATION OF
OF ROCKY MOUNTAIN ARSENAL HYDRAZINE RINSEWATER
(1 of 4)

Compounds	Feed Rate (a) (tons/yr)	Thermal Destruction Efficiency (%) (b)	Theoretical Destruction Efficiency (%) (b)	Emission Rate of POHC (b) (tons/yr)	Emission Rate of PIC (b) (tons/yr)	Total Emission Rate (b) (tons/yr)	Effective Theoretical Destruction Efficiency (%) (b)	Emission Rate Normalized to PCE at 99.99% (tons/yr) (b)	Normalized Destruction Efficiency to PCE at 99.99% (%) (b)	Calc. Emission Rate Normalized to 99.99% Maximum (c) (tons/yr)	Destruction Efficiency Normalized to 99.99% Maximum (d) (%) (d)	Emission Rate Normalized to 99.99% Maximum (e) (grams/sec)
1,1-Dichloroethane	2.92E-05	99.99	99.9999	2.920E-11	0.000E+00	2.920E-11	99.9999	5.554E-14	100.0000	2.92E-09	99.9900	1.05E-10
1,1-Dichloroethene	1.56E-05	99.99	99.9999	1.560E-11	1.791E-09	1.807E-09	99.9884	3.436E-12	100.0000	1.56E-09	99.9900	5.62E-11
1,2-Dichloroethane	9.11E-06	99.99	99.9999	9.110E-12	7.310E-10	7.401E-10	99.9919	1.408E-12	100.0000	9.11E-10	99.9900	3.28E-11
1,2-Dichloropropane	5.79E-06	99.99	99.9999	5.790E-12	0.000E+00	5.790E-12	99.9999	1.101E-14	100.0000	5.79E-10	99.9900	2.08E-11
Acetone	3.50E-05	99.99	99.9999	3.500E-11	0.000E+00	3.500E-11	99.9999	6.657E-14	100.0000	3.50E-09	99.9900	1.26E-10
Benzene	1.02E-05	51.00	99.5100	4.998E-08	8.848E-08	1.385E-07	98.6425	2.634E-10	99.9974	1.02E-09	99.9900	3.67E-11
Chlorobenzene	2.45E-06	90.00	99.9000	2.450E-09	4.137E-10	2.864E-09	99.8831	5.447E-12	99.9998	2.45E-10	99.9900	8.82E-12
Chloroethane	8.99E-05	99.99	99.9999	8.990E-11	0.000E+00	8.990E-11	99.9999	1.710E-13	100.0000	8.99E-09	99.9900	3.24E-10
Chloroform	4.38E-04	99.99	99.9999	4.380E-10	0.000E+00	4.380E-10	99.9999	8.331E-13	100.0000	4.38E-08	99.9900	1.58E-09
Chloromethane	1.21E-05	96.00	99.9600	4.840E-09	7.916E-08	8.400E-08	99.3058	1.598E-10	99.9987	1.21E-09	99.9900	4.36E-11
Dimethyl Disulfide	2.48E-05	99.99	99.9999	2.480E-11	0.000E+00	2.480E-11	99.9999	4.717E-14	100.0000	2.48E-09	99.9900	8.93E-11
Methylethyl ketone	1.53E-05	99.99	99.9999	1.530E-11	0.000E+00	1.530E-11	99.9999	2.910E-14	100.0000	1.53E-09	99.9900	5.51E-11
Methylene Chloride	7.31E-04	99.99	99.9999	7.310E-10	2.225E-09	2.956E-09	99.9996	5.623E-12	100.0000	7.31E-08	99.9900	2.63E-09
Tetrachloroethene (PCE)	1.67E-06	99.90	99.9990	1.670E-11	8.778E-08	8.780E-08	94.7426	1.670E-10	99.9900	1.67E-10	99.9900	6.01E-12
Toluene	2.66E-05	99.32	99.9932	1.809E-09	3.666E-09	5.475E-09	99.9794	1.041E-11	100.0000	2.66E-09	99.9900	9.58E-11
Trichloroethene	1.78E-05	99.95	99.9995	8.900E-11	1.390E-08	1.399E-08	99.9214	2.661E-11	99.9999	1.78E-09	99.9900	6.41E-11
Vinyl acetate	1.10E-05	99.99	99.9999	1.100E-11	0.000E+00	1.100E-11	99.9999	2.092E-14	100.0000	1.10E-09	99.9900	3.96E-11
Vinyl chloride	1.02E-05	99.99	99.9999	1.020E-11	4.932E-08	4.933E-08	99.5164	9.383E-11	99.9991	1.02E-09	99.9900	3.67E-11
o,p-Xylene (total)	1.90E-06	99.99	99.9999	1.900E-12	7.943E-09	7.945E-09	99.5819	1.511E-11	99.9992	1.90E-10	99.9900	6.84E-12
Aniline	1.78E-03	94.60	99.9460	9.612E-07	5.100E-11	9.613E-07	99.9460	1.828E-09	99.9999	1.78E-07	99.9900	6.41E-09
Atrazine	1.10E-05	99.99	99.9999	1.100E-11	0.000E+00	1.100E-11	99.9999	2.092E-14	100.0000	1.10E-09	99.9900	3.96E-11
Benzothiazole	3.69E-06	99.99	99.9999	3.690E-12	0.000E+00	3.690E-12	99.9999	7.019E-15	100.0000	3.69E-10	99.9900	1.33E-11

TABLE 9.5-2
ORGANIC EMISSION RATES FROM INCINERATION OF
OF ROCKY MOUNTAIN ARSENAL HYDRAZINE Rinsewater
(continued 2 of 4)

Compounds	Feed Rate (a) (tons/yr)	Thermal Destruction Efficiency		Emission Rate of POHC (b) (tons/yr)	Emission Rate of PIC (b) (tons/yr)	Total Emission Rate (b) (tons/yr)	Effective Theoretical Destruction Efficiency		Emission Rate Normalized to PCE at 99.99% (tons/yr) (b)	Normalized Destruction Efficiency to PCE at 99.99% (%) (b)		Calc. Emiss. Rate Normalized to 99.99% Maximum (c) (tons/yr)	Destruction Efficiency Normalized to 99.99% Maximum (d)		Emission Rate Normalized to 99.99% Maximum (e) (grams/sec)
		(%) (b)	(%) (b)				(%) (b)	(%) (b)					(%) (d)	(%) (d)	
4-Chloroaniline	1.02E-06	99.81	99.9981	1.938E-11	1.780E-09	1.799E-09	99.8236	99.9997	3.423E-12	100.0000	99.9997	1.02E-10	99.9900	99.9900	3.67E-12
Malathion	1.24E-07	99.99	99.9999	1.240E-13	0.000E+00	1.240E-13	99.9999	100.0000	2.359E-16	100.0000	100.0000	1.24E-11	99.9900	99.9900	4.46E-13
4-Methylphenol	1.39E-05	99.99	99.9999	1.390E-11	2.868E-11	4.258E-11	99.9997	100.0000	8.098E-14	100.0000	100.0000	1.39E-09	99.9900	99.9900	5.00E-11
Naphthalene	1.64E-06	84.00	99.8400	2.624E-09	3.997E-08	4.259E-08	97.4029	99.9951	8.101E-11	99.9951	99.9951	1.64E-10	99.9900	99.9900	5.90E-12
Parathion	1.96E-07	99.99	99.9999	1.960E-13	0.000E+00	1.960E-13	99.9999	100.0000	3.728E-16	100.0000	100.0000	1.96E-11	99.9900	99.9900	7.06E-13
Phenanthrene	2.83E-07	88.00	99.8800	3.396E-10	1.583E-08	1.617E-08	94.2856	99.9891	3.076E-11	99.9891	99.9891	3.08E-11	99.9891	99.9891	1.11E-12
Phenol	6.92E-07	99.99	99.9999	6.920E-13	8.177E-08	8.177E-08	88.1833	99.9775	1.555E-10	99.9775	99.9775	1.56E-10	99.9775	99.9775	5.60E-12
Vapona	7.74E-07	99.99	99.9999	7.740E-13	0.000E+00	7.740E-13	99.9999	100.0000	1.472E-15	100.0000	100.0000	7.74E-11	99.9900	99.9900	2.79E-12
bis(2-Ethylhexyl)phthalate	2.18E-06	99.99	99.9999	2.180E-12	0.000E+00	2.180E-12	99.9999	100.0000	4.147E-15	100.0000	100.0000	2.18E-10	99.9900	99.9900	7.85E-12
Hydrazine	3.07E-01	99.99	99.9999	3.070E-07	0.000E+00	3.070E-07	99.9999	100.0000	5.839E-10	100.0000	100.0000	3.07E-05	99.9900	99.9900	1.11E-06
Monomethyl hydrazine	9.72E-02	99.99	99.9999	9.720E-08	0.000E+00	9.720E-08	99.9999	100.0000	1.849E-10	100.0000	100.0000	9.72E-06	99.9900	99.9900	3.50E-07
Unsymmetrical dimethyl hydrazine	3.84E-01	99.99	99.9999	3.840E-07	0.000E+00	3.840E-07	99.9999	100.0000	7.304E-10	100.0000	100.0000	3.84E-05	99.9900	99.9900	1.38E-06
n-Nitrosodimethylamine	9.88E-05	99.99	99.9999	9.880E-11	0.000E+00	9.880E-11	99.9999	100.0000	1.879E-13	100.0000	100.0000	9.88E-09	99.9900	99.9900	3.56E-10
Aldrin	4.91E-08	99.99	99.9999	4.910E-14	0.000E+00	4.910E-14	99.9999	100.0000	9.339E-17	100.0000	100.0000	4.91E-12	99.9900	99.9900	1.77E-13
Dieldrin	9.02E-08	99.99	99.9999	9.020E-14	0.000E+00	9.020E-14	99.9999	100.0000	1.716E-16	100.0000	100.0000	9.02E-12	99.9900	99.9900	3.25E-13
Lindane	4.19E-08	99.99	99.9999	4.190E-14	0.000E+00	4.190E-14	99.9999	100.0000	7.970E-17	100.0000	100.0000	4.19E-12	99.9900	99.9900	1.51E-13

TABLE 9.5-2
ORGANIC EMISSION RATES FROM INCINERATION OF
OF ROCKY MOUNTAIN ARSENAL HYDRAZINE RINSEWATER
(continued 3 of 4)

PICS with Specific Precursors	Feed Rate (a) (tons/yr)	Thermal Destruction Efficiency (%) (b)	Theoretical Destruction Efficiency (%) (b)	Emission Rate of POHC (b) (tons/yr)	Emission Rate of PIC (b) (tons/yr)	Total Emission Rate (b) (tons/yr)	Emission Rate	
							Normalized to PCE at 99.99% (tons/yr) (b)	Total Emission Rate (f) (grams/sec)
Carbon Tetrachloride					5.155E-09	5.155E-09	9.805E-12	1.86E-10
1,2-Dichloroethene					1.350E-09	1.350E-09	2.568E-12	4.86E-11
Hexachlorobenzene					2.385E-08	2.385E-08	4.536E-11	8.59E-10
Pentachlorobenzene					9.734E-09	9.734E-09	1.851E-11	3.50E-10
Tetrachlorobenzene					4.769E-09	4.769E-09	9.072E-12	1.72E-10
Trichlorobenzene					2.420E-09	2.420E-09	4.603E-12	8.71E-11
Dichlorobenzene					1.021E-09	1.021E-09	1.941E-12	3.67E-11
Biphenyl					3.976E-07	3.976E-07	7.563E-10	1.43E-08
4-Chlorobiphenyl					2.511E-10	2.511E-10	4.776E-13	9.04E-12
4,4'-Dichlorobiphenyl					1.265E-11	1.265E-11	2.406E-14	4.55E-13
Benzaldehyde					8.111E-08	8.111E-08	1.543E-10	2.92E-09
Benzoic Acid					3.962E-08	3.962E-08	7.537E-11	1.43E-09
Quinoline					8.905E-09	8.905E-09	1.694E-11	3.21E-10
Carbazole					1.781E-09	1.781E-09	3.388E-12	6.41E-11
Acetonitrile					3.174E-06	3.174E-06	6.038E-09	1.14E-07
Acrylonitrile					1.347E-06	1.347E-06	2.561E-09	4.85E-08
Benzonitrile					8.653E-07	8.653E-07	1.646E-09	3.12E-08
Naphthalene Carbonitrile					8.653E-07	8.653E-07	1.646E-09	3.12E-08
Pyridine					8.653E-07	8.653E-07	1.646E-09	3.12E-08

TABLE 9.5-2
ORGANIC EMISSION RATES FROM INCINERATION OF
OF ROCKY MOUNTAIN ARSENAL HYDRAZINE RINSEWATER
(continued 4 of 4)

PICS without Specific Precursors	Feed Rate (a) (tons/yr)	Thermal Destruction Efficiency		Theoretical Destruction Efficiency (%) (b)	Emission Rate of POHC (b) (tons/yr)	Emission Rate of PIC (b) (tons/yr)	Total Emission Rate (b) (tons/yr)	Emission Rate Normalized to PCE at 99.99% (tons/yr) (b)	Total Emission Rate (f) (grams/sec)
		(%) (b)	(%) (b)						
Benzofuran						3.958E-07	3.958E-07	7.528E-10	1.42E-08
Dibenzofuran						7.916E-09	7.916E-09	1.506E-11	2.85E-10
Acenaphthalene						3.958E-08	3.958E-08	7.528E-11	1.42E-09
Acenaphthene						3.958E-08	3.958E-08	7.528E-11	1.42E-09
Fluoranthene						7.916E-08	7.916E-08	1.506E-10	2.85E-09
Pyrene						1.583E-07	1.583E-07	3.011E-10	5.70E-09
Fluorene						7.916E-09	7.916E-09	1.506E-11	2.85E-10
Benzo(a)pyrene						7.916E-08	7.916E-08	1.506E-10	2.85E-09
Dibenzo(a)anthracene						7.916E-08	7.916E-08	1.506E-10	2.85E-09
Chrysene						7.916E-09	7.916E-09	1.506E-11	2.85E-10

(a) From Table 9.5-1, Sum of the Averages.

(b) From Dr. Dellingers' analysis. See Table 9.5-8.

(c) Calculated Emission Rate = Feed Rate x (1 - (99.99%/100)) or Emission Rate Normalized for PCE whichever is less.

(d) 99.99% or Destruction Efficiency Normalized to PCE, whichever is less.

(e) Assuming 7000 operating hours per year.

(f) Total (unnormalized) Emission Rate was converted to grams per second, assuming 7000 operating hours per year.

TABLE 9.5-4
METALS FEED RATES FROM HYDRAZINE RINSEWATER
(lb/hrs)

Metals	Tank U.S.3			Tank U.S.4			In Ground Sump			Sum of the	
	1	2	3	1	2	3	1	2	3	Average	Maximum
Silver	2.98E-09	2.98E-09	1.38E-08	1.19E-08	2.67E-08	1.19E-08	2.38E-09	2.38E-09	2.38E-09	2.58E-08	4.29E-08
Aluminum											
Arsenic	1.91E-06	1.84E-06	1.28E-06	2.24E-06	1.92E-06	2.43E-06	5.48E-06	5.84E-06	6.87E-06	9.94E-06	1.12E-05
Boron											
Barium											
Beryllium											
Calcium											
Cadmium	7.45E-09	7.45E-09	7.45E-09	2.98E-08	1.19E-08	2.98E-08	2.00E-08	1.43E-08	4.48E-08	5.77E-08	8.21E-08
Cobalt											
Chromium	1.84E-07	1.56E-07	6.41E-08	7.89E-07	1.34E-06	8.29E-07	1.78E-07	1.85E-07	2.55E-07	1.32E-06	1.77E-06
Copper	2.23E-07	2.53E-08	2.53E-08	1.01E-07	5.96E-07	1.01E-07	2.03E-08	2.03E-08	2.03E-08	3.78E-07	8.39E-07
Iron	1.43E-06	1.99E-06	2.41E-02	7.55E-04	N/A	1.44E-03	2.32E-05	1.67E-05	2.58E-05	9.17E-03	2.56E-02
Mercury	2.27E-08	2.59E-08	2.20E-08	2.87E-08	7.84E-08	3.90E-08	2.38E-09	2.38E-09	2.38E-09	7.46E-08	1.07E-07
Potassium											
Lithium											
Magnesium											
Manganese											
Molybdenum											
Sodium											
Nickel											
Phosphorus											
Lead	7.45E-08	7.45E-08	7.45E-08	2.98E-07	1.19E-07	2.98E-07	5.96E-08	5.96E-08	5.96E-08	3.73E-07	4.32E-07
Sulfur											
Antimony											
Selenium	3.73E-08	3.73E-08	3.73E-08	2.09E-07	1.19E-07	1.49E-07	2.98E-08	2.98E-08	2.98E-08	2.26E-07	2.76E-07
Silicon											
Tin											
Strontium											
Titanium											
Thallium											
Vanadium											
Yttrium											
Zinc	8.61E-07	8.26E-07	2.98E-08	1.60E-06	1.19E-06	1.48E-06	1.01E-06	5.87E-07	1.32E-06	2.97E-06	3.78E-06

**TABLE 9.5-5
EXPECTED METAL EMISSIONS BASED ON MEASURED
CONCENTRATIONS IN HYDRAZINE RINSEWATER**

Metals	Based on Waste Stream Data			
	Feed	Metals to	Removal	Controlled
	Rates (1) (lb/hr)	APCD (2) (%)	Efficiency (3) (%)	Emissions (4) (lb/hr)
Aluminum	NA	100	97 (5)	NA
Antimony	NA	100	97	NA
Arsenic	9.94E-06	100	97	2.98E-07
Barium	NA	100	99.4	NA
Beryllium	NA	100	99.4	NA
Boron	NA	100	97 (7)	NA
Cadmium	5.77E-08	100	97	1.73E-09
Calcium	NA	100	97 (6)	NA
Chromium	1.32E-06	100	99.4	7.95E-09
Cobalt	NA	100	97 (5)	NA
Copper	3.78E-07	100	97 (5)	1.13E-08
Iron	9.17E-03	100	97 (5)	2.75E-04
Lead	3.73E-07	100	97	1.12E-08
Lithium	NA	100	NA	NA
Magnesium	NA	100	97 (5)	NA
Manganese	NA	100	97 (5)	NA
Mercury	7.46E-08	100	85	1.12E-08
Molybdenum	NA	100	85 (5)	NA
Nickel	NA	100	97 (5)	NA
Potassium	NA	100	97 (6)	NA
Selenium	2.26E-07	100	85 (5)	3.39E-08
Silicon	NA	100	NA	NA
Silver	2.58E-08	100	99.4	1.55E-10
Sodium	NA	100	97 (8)	NA
Strontium	NA	100	97 (7)	NA
Thallium	NA	100	97	NA
Tin	NA	100	97 (6)	NA
Titanium	NA	100	97 (5)	NA
Vanadium	NA	100	97 (5)	NA
Yttrium	NA	100	97 (7)	NA
Zinc	2.97E-06	100	97 (5)	8.90E-08

- (1) Based upon the average concentrations measured in each of three hydrazine wastewater sources.
- (2) Percent of metal volatilization is estimated at 100% for all metals in liquid waste based on EPA Guidance on Metals and HCl Controls from Hazardous Waste Incineration, Draft Final Report, August 1989, Table III-9.
- (3) Based on EPA Guidance (note 2), Table III-8. The removal efficiency of the wet scrubber in series with the Venturi scrubber at 20" of water was calculated. This removal efficiency was used in series with the removal efficiency of the Venturi scrubber at 60" of water.
- (4) Controlled Emissions = Uncontrolled Emissions x % Metals to APCD x (1- % Removal Efficiency)
- (5) Assumed removal efficiency of antimony, arsenic, cadmium, lead and thallium or of mercury per footnote (3), based on scrubber efficiency similar to those compounds in "Hazardous Waste Stream Trace Metal Concentrations and Emissions", Mitre Corp., U.S.EPA Office of Solid Waste, November 1983.
- (6) Similar to copper, cobalt and titanium in showing no concentration with particle size per Davison, Natusch, et al. "Trace Elements in Fly Ash", Environmental Science & Technology, Vol. 8, No. 13, December 1974. Therefore, assumed scrubber efficiency similar.
- (7) Similar emissions to feed ratio to that of iron and aluminum per Kaakinen, Jorden, et al., "Trace Element Behavior in Coal-Fired Power Plant", Environmental Science & Technology, Vol. 9, No. 9, September 1975. Therefore, assumed scrubber efficiency similar.
- (8) Similar control efficiency to that of calcium, iron and potassium per Klein, Andren, et al., "Pathways of Thirty-seven Trace Elements Through Coal-Fired Power Plant", Environmental Science & Technology, Vol. 9, No. 10, October 1975. Therefore, assumed scrubber efficiency similar.

TABLE 9.5-6
MAXIMUM METAL EMISSIONS BASED ON MEASURED
CONCENTRATIONS IN HYDRAZINE RINSEWATER

Metals	Based on Waste Stream Data				
	Feed		Metals to	Removal	Controlled
	Rates	(1)	APCD	Efficiency	Emissions
	(lb/hr)		(%)	(%)	(lb/hr)
Aluminum	NA		100	97 (5)	NA
Antimony	NA		100	97	NA
Arsenic	1.12E-05		100	97	3.36E-07
Barium	NA		100	99.4	NA
Beryllium	NA		100	99.4	NA
Boron	NA		100	97 (7)	NA
Cadmium	8.21E-08		100	97	2.46E-09
Calcium	NA		100	97 (6)	NA
Chromium	1.77E-06		100	99.4	1.06E-08
Cobalt	NA		100	97 (5)	NA
Copper	8.39E-07		100	97 (5)	2.52E-08
Iron	2.56E-02		100	97 (5)	7.68E-04
Lead	4.32E-07		100	97	1.30E-08
Lithium	NA		100	NA	NA
Magnesium	NA		100	97 (5)	NA
Manganese	NA		100	97 (5)	NA
Mercury	1.07E-07		100	85	1.60E-08
Molybdenum	NA		100	85 (5)	NA
Nickel	NA		100	97 (5)	NA
Potassium	NA		100	97 (6)	NA
Selenium	2.76E-07		100	85 (5)	4.14E-08
Silicon	NA		100	NA	NA
Silver	4.29E-08		100	99.4	2.57E-10
Sodium	NA		100	97 (8)	NA
Strontium	NA		100	97 (7)	NA
Thallium	NA		100	97	NA
Tin	NA		100	97 (6)	NA
Titanium	NA		100	97 (5)	NA
Vanadium	NA		100	97 (5)	NA
Yttrium	NA		100	97 (7)	NA
Zinc	3.78E-06		100	97 (5)	1.13E-07

- (1) Based upon the maximum concentrations measured in each of three hydrazine wastewater sources.
- (2) Percent of metal volatilization is estimated at 100% for all metals in liquid waste based on EPA Guidance on Metals and HCl Controls from Hazardous Waste Incineration, Draft Final Report, August 1989, Table III-9.
- (3) Based on EPA Guidance (note 2), Table III-8. The removal efficiency of the wet scrubber in series with the Venturi scrubber at 20" of water was calculated. This removal efficiency was used in series with the removal efficiency of the Venturi scrubber at 60" of water.
- (4) Controlled Emissions = Uncontrolled Emissions x % Metals to APCD x (1- % Removal Efficiency)
- (5) Assumed removal efficiency of antimony, arsenic, cadmium, lead and thallium or of mercury per footnote (3), based on scrubber efficiency similar to those compounds in "Hazardous Waste Stream Trace Metal Concentrations and Emissions", Mitre Corp., U.S.EPA Office of Solid Waste, November 1983.
- (6) Similar to copper, cobalt and titanium in showing no concentration with particle size per Davison, Natusch, et al. "Trace Elements in Fly Ash", Environmental Science & Technology, Vol. 8, No. 13, December 1974. Therefore, assumed scrubber efficiency similar.
- (7) Similar emissions to feed ratio to that of iron and aluminum per Kaakinen, Jorden, et al., "Trace Element Behavior in Coal-Fired Power Plant", Environmental Science & Technology, Vol. 9, No. 9, September 1975. Therefore, assumed scrubber efficiency similar.
- (8) Similar control efficiency to that of calcium, iron and potassium per Klein, Andren, et al., "Pathways of Thirty-seven Trace Elements Through Coal-Fired Power Plant", Environmental Science & Technology, Vol. 9, No. 10, October 1975. Therefore, assumed scrubber efficiency similar.

TABLE 9.5-7
EMISSION RATES FOR ROCKY MOUNTAIN ARSENAL
HYDRAZINE RINSEWATER SUBMERGED QUENCH INCINERATOR

Pollutant	Base Case (a)			Sensitivity Case (b)		
	(ton/yr)	(lb/hr)	(g/sec) (c)	(ton/yr)	(lb/hr)	(g/sec) (c)
Metals						
Aluminum	NA	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA	NA
Arsenic	1.04E-06	2.98E-07	3.76E-08	1.18E-06	3.36E-07	4.24E-08
Barium	NA	NA	NA	NA	NA	NA
Beryllium	NA	NA	NA	NA	NA	NA
Boron	NA	NA	NA	NA	NA	NA
Cadmium	6.06E-09	1.73E-09	2.18E-10	8.62E-09	2.46E-09	3.10E-10
Calcium	NA	NA	NA	NA	NA	NA
Chromium	2.78E-08	7.95E-09	1.00E-09	3.73E-08	1.06E-08	1.34E-09
Cobalt	NA	NA	NA	NA	NA	NA
Copper	3.97E-08	1.13E-08	1.43E-09	8.81E-08	2.52E-08	3.17E-09
Iron	9.63E-04	2.75E-04	3.47E-05	2.69E-03	7.68E-04	9.68E-05
Lead	3.91E-08	1.12E-08	1.41E-09	4.54E-08	1.30E-08	1.63E-09
Lithium	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA
Mercury	3.92E-08	1.12E-08	1.41E-09	5.60E-08	1.60E-08	2.02E-09
Molybdenum	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA
Selenium	1.19E-07	3.39E-08	4.27E-09	1.45E-07	4.14E-08	5.21E-09
Silicon	NA	NA	NA	NA	NA	NA
Silver	5.42E-10	1.55E-10	1.95E-11	9.00E-10	2.57E-10	3.24E-11
Sodium	NA	NA	NA	NA	NA	NA
Strontium	NA	NA	NA	NA	NA	NA
Thallium	NA	NA	NA	NA	NA	NA
Tin	NA	NA	NA	NA	NA	NA
Titanium	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA
Yttrium	NA	NA	NA	NA	NA	NA
Zinc	3.12E-07	8.90E-08	1.12E-08	3.97E-07	1.13E-07	1.43E-08
Organics						
1,1-Dichloroethane	2.92E-09	8.34E-10	1.05E-10			
1,1-Dichloroethene	1.56E-09	4.46E-10	5.62E-11			
1,2-Dichloroethane	9.11E-10	2.60E-10	3.28E-11			
1,2-Dichloropropane	5.79E-10	1.65E-10	2.08E-11			
Acetone	3.50E-09	1.00E-09	1.26E-10			
Benzene	1.02E-09	2.91E-10	3.67E-11			
Chlorobenzene	2.45E-10	7.00E-11	8.82E-12			
Chloroethane	8.99E-09	2.57E-09	3.24E-10			
Chloroform	4.38E-08	1.25E-08	1.58E-09			
Chloromethane	1.21E-09	3.46E-10	4.36E-11			
Dimethyl Disulfide	2.48E-09	7.09E-10	8.93E-11			
Methylethyl ketone	1.53E-09	4.37E-10	5.51E-11			
Methylene Chloride	7.31E-08	2.09E-08	2.63E-09			
Tetrachloroethene (PCE)	1.67E-10	4.77E-11	6.01E-12			
Toluene	2.66E-09	7.60E-10	9.58E-11			
Trichloroethene	1.78E-09	5.09E-10	6.41E-11			
Vinyl acetate	1.10E-09	3.14E-10	3.96E-11			
Vinyl chloride	1.02E-09	2.91E-10	3.67E-11			
o,p-Xylene (total)	1.90E-10	5.43E-11	6.84E-12			
Aniline	1.78E-07	5.09E-08	6.41E-09			

TABLE 9.5-7
EMISSION RATES FOR ROCKY MOUNTAIN ARSENAL
HYDRAZINE RINSEWATER SUBMERGED QUENCH INCINERATOR
(continued)

Pollutant	Base Case (a)			Sensitivity Case (b)		
	(ton/yr)	(lb/hr)	(g/sec) (c)	(ton/yr)	(lb/hr)	(g/sec) (c)
Organics						
Atrazine	1.10E-09	3.14E-10	3.96E-11			
Benzothiazole	3.69E-10	1.05E-10	1.33E-11			
4-Chloroaniline	1.02E-10	2.91E-11	3.67E-12			
Malathion	1.24E-11	3.54E-12	4.46E-13			
4-Methylphenol	1.39E-09	3.97E-10	5.00E-11			
Naphthalene	1.64E-10	4.69E-11	5.90E-12			
Parathion	1.96E-11	5.60E-12	7.06E-13			
Phenanthrene	3.08E-11	8.79E-12	1.11E-12			
Phenol	1.56E-10	4.44E-11	5.60E-12			
Vapona	7.74E-11	2.21E-11	2.79E-12			
bis(2-Ethylhexyl)phthalate	2.18E-10	6.23E-11	7.85E-12			
Hydrazine	3.07E-05	8.77E-06	1.11E-06			
Monomethyl hydrazine	9.72E-06	2.78E-06	3.50E-07			
Unsymmetrical dimethyl hydrazine	3.84E-05	1.10E-05	1.38E-06			
n-Nitrosodimethylamine	9.88E-09	2.82E-09	3.56E-10			
Aldrin	4.91E-12	1.40E-12	1.77E-13			
Dieldrin	9.02E-12	2.58E-12	3.25E-13			
Lindane	4.19E-12	1.20E-12	1.51E-13			
PICs with Specific Precursors						
Carbon Tetrachloride	5.15E-09	1.47E-09	1.86E-10			
1,2-Dichloroethene	1.35E-09	3.86E-10	4.86E-11			
Hexachlorobenzene	2.38E-08	6.81E-09	8.59E-10			
Pentachlorobenzene	9.73E-09	2.78E-09	3.50E-10			
Tetrachlorobenzene	4.77E-09	1.36E-09	1.72E-10			
Trichlorobenzene	2.42E-09	6.91E-10	8.71E-11			
Dichlorobenzene	1.02E-09	2.92E-10	3.67E-11			
Biphenyl	3.98E-07	1.14E-07	1.43E-08			
4-Chlorobiphenyl	2.51E-10	7.17E-11	9.04E-12			
4,4'-Dichlorobiphenyl	1.27E-11	3.61E-12	4.55E-13			
Benzaldehyde	8.11E-08	2.32E-08	2.92E-09			
Benzoic Acid	3.96E-08	1.13E-08	1.43E-09			
Quinoline	8.91E-09	2.54E-09	3.21E-10			
Carbazole	1.78E-09	5.09E-10	6.41E-11			
Acetonitrile	3.17E-06	9.07E-07	1.14E-07			
Acrylonitrile	1.35E-06	3.85E-07	4.85E-08			
Benzonitrile	8.65E-07	2.47E-07	3.12E-08			
Naphthalene Carbonitrile	8.65E-07	2.47E-07	3.12E-08			
Pyridine	8.65E-07	2.47E-07	3.12E-08			
PICs without Specific Precursors						
Benzofuran	3.96E-07	1.13E-07	1.42E-08			
Dibenzofuran	7.92E-09	2.26E-09	2.85E-10			
Acenaphthalene	3.96E-08	1.13E-08	1.42E-09			
Acenaphthene	3.96E-08	1.13E-08	1.42E-09			
Fluoranthene	7.92E-08	2.26E-08	2.85E-09			
Pyrene	1.58E-07	4.52E-08	5.70E-09			
Fluorene	7.92E-09	2.26E-09	2.85E-10			
Benzo(a)pyrene	7.92E-08	2.26E-08	2.85E-09			
Dibenzo(a)anthracene	7.92E-08	2.26E-08	2.85E-09			
Chrysene	7.92E-09	2.26E-09	2.85E-10			

- (a) Based upon the average concentrations from measured in each of three hydrazine wastewater sources.
(b) Based upon the maximum concentrations from measured in each of three hydrazine wastewater sources.
(c) Assuming 7000 hours of operation per year.

Table 9.5-8

Basin F Emissions

	A	B	C	D	E
1			Feed Rate		Theoretical DE
2	*	Compound	(tons/yr)	DE (Thermal)	at 900 C (%)
3					
4	1	1,1-Dichloroethane	2.92E-05	99.99	99.9999
5	2	1,1-Dichloroethene	1.56E-05	99.99	99.9999
6	3	1,2-Dichloroethane	9.11E-06	99.99	99.9999
7	4	1,2-Dichloropropane	5.79E-06	99.99	99.9999
8	5	Acetone	3.50E-05	99.99	99.9999
9	6	Benzene	1.02E-05	51.00	99.5100
10	7	Chlorobenzene	2.45E-06	90.00	99.9000
11	8	Chloroethane	8.99E-05	99.99	99.9999
12	9	Chloroform	4.38E-04	99.99	99.9999
13	10	Chloromethane	1.21E-05	96.00	99.9600
14	11	Dimethyl Sulfide	2.48E-05	99.99	99.9999
15	12	Methyl Ethyl Ketone	1.53E-05	99.99	99.9999
16	13	Methylene Chloride	7.31E-04	99.99	99.9999
17	14	Tetrachloroethene	1.67E-06	99.90	99.9990
18	15	Toluene	2.66E-05	99.32	99.9932
19	16	Trichloroethene	1.78E-05	99.95	99.9995
20	17	Vinyl Acetate	1.10E-05	99.99	99.9999
21	18	Vinyl Chloride	1.02E-05	99.99	99.9999
22	19	o,p-Xylene (Total)	1.90E-06	99.99	99.9999
23	20	Aniline	1.78E-03	94.60	99.9460
24	21	Atrazine	1.10E-05	99.99	99.9999
25	22	Benzothiazole	3.69E-06	99.99	99.9999
26	23	4-Chloroaniline	1.02E-06	99.81	99.9981
27	24	Malathion	1.24E-07	99.99	99.9999
28	25	4-Methylphenol	1.39E-05	99.99	99.9999
29	26	Naphthalene	1.64E-06	84.00	99.8400
30	27	Parathion	1.96E-07	99.99	99.9999
31	28	Phenol	6.92E-07	99.99	99.9999
32	29	Vapona	7.74E-07	99.99	99.9999
33	30	bis (2-Ethylhexyl) phthalate	2.18E-06	99.99	99.9999
34	31	Hydrazine	3.07E-01	99.99	99.9999
35	32	Monomethylhydrazine	9.72E-02	99.99	99.9999
36	33	Unsymmetrical dimethyl hydrazine	3.84E-01	99.99	99.9999
37	34	n-Nitrosodimethylamine	9.88E-05	99.99	99.9999
38	35	Aldrin	4.91E-08	99.99	99.9999
39	36	Dieldrin	9.02E-08	99.99	99.9999
40	37	Lindane	4.19E-08	99.99	99.9999
41	38	Phenanthrene	2.83E-07	88.00	99.8800

Table 9.5-8

Basin F Emissions
(continued)

	A	B	C	D	E
42					
43		PICS With Specific Precursors			
44		Carbon Tetrachloride			
45		1,2 Dichloroethene			
46		Hexachlorobenzene			
47		Pentachlorobenzene			
48		Tetrachlorobenzene			
49		Trichlorobenzene			
50		Dichlorobenzene			
51		Biphenyl			
52		4-Chlorobiphenyl			
53		4,4'-Dichlorobiphenyl			
54		Benzaldehyde			
55		Benzoic Acid			
56		Quinoline			
57		Carbazole			
58		Acetonitrile			
59		Acrylonitrile			
60		Benzonitrile			
61		Naphthalene Carbonitrile			
62		Puridine			
63					
64		PICS WITHOUT SPECIFIC PRECURSORS			
65		Benzofuran			
66		Dibenzofuran			
67		Acenaphthalene			
68		Acenaphthene			
69		Fluoranthene			
70		Pyrene			
71		Fluorene			
72		Benzo-[a]-pyrene			
73		Dibenzo-[a]-anthracene			
74		Chrysene			

Table 9.5-8

Basin F Emissions
(continued)

	F	G	H	I
1	Emission Rate	Emission Rate	Emission Rate as	Effective Theoretical
2	of POHC (tons/yr)	as PIC (tons/yr)	POHC and PIC (tons/yr)	DE at 900C (%)
3				
4	2.920E-11	0.000E+00	2.920E-11	99.9999
5	1.560E-11	1.791E-09	1.807E-09	99.9884
6	9.110E-12	7.310E-10	7.401E-10	99.9919
7	5.790E-12	0.000E+00	5.790E-12	99.9999
8	3.500E-11	0.000E+00	3.500E-11	99.9999
9	4.998E-08	8.848E-08	1.385E-07	98.6425
10	2.450E-09	4.137E-10	2.864E-09	99.8831
11	8.990E-11	0.000E+00	8.990E-11	99.9999
12	4.380E-10	0.000E+00	4.380E-10	99.9999
13	4.840E-09	7.916E-08	8.400E-08	99.3058
14	2.480E-11	0.000E+00	2.480E-11	99.9999
15	1.530E-11	0.000E+00	1.530E-11	99.9999
16	7.310E-10	2.225E-09	2.956E-09	99.9996
17	1.670E-11	8.778E-08	8.780E-08	94.7426
18	1.809E-09	3.666E-09	5.475E-09	99.9794
19	8.900E-11	1.390E-08	1.399E-08	99.9214
20	1.100E-11	0.000E+00	1.100E-11	99.9999
21	1.020E-11	4.932E-08	4.933E-08	99.5164
22	1.900E-12	7.943E-09	7.945E-09	99.5819
23	9.612E-07	5.100E-11	9.613E-07	99.9460
24	1.100E-11	0.000E+00	1.100E-11	99.9999
25	3.690E-12	0.000E+00	3.690E-12	99.9999
26	1.938E-11	1.780E-09	1.799E-09	99.8236
27	1.240E-13	0.000E+00	1.240E-13	99.9999
28	1.390E-11	2.868E-11	4.258E-11	99.9997
29	2.624E-09	3.997E-08	4.259E-08	97.4029
30	1.960E-13	0.000E+00	1.960E-13	99.9999
31	6.920E-13	8.177E-08	8.177E-08	88.1833
32	7.740E-13	0.000E+00	7.740E-13	99.9999
33	2.180E-12	0.000E+00	2.180E-12	99.9999
34	3.070E-07	0.000E+00	3.070E-07	99.9999
35	9.720E-08	0.000E+00	9.720E-08	99.9999
36	3.840E-07	0.000E+00	3.840E-07	99.9999
37	9.880E-11	0.000E+00	9.880E-11	99.9999
38	4.910E-14	0.000E+00	4.910E-14	99.9999
39	9.020E-14	0.000E+00	9.020E-14	99.9999
40	4.190E-14	0.000E+00	4.190E-14	99.9999
41	3.396E-10	1.583E-08	1.617E-08	94.2856

Table 9.5-8

Basin F Emissions
(continued)

	F	G	H	I
42				
43				
44		5.155E-09	5.155E-09	
45		1.350E-09	1.350E-09	
46		2.385E-08	2.385E-08	
47		9.734E-09	9.734E-09	
48		4.769E-09	4.769E-09	
49		2.420E-09	2.420E-09	
50		1.021E-09	1.021E-09	
51		3.976E-07	3.976E-07	
52		2.511E-10	2.511E-10	
53		1.265E-11	1.265E-11	
54		8.111E-08	8.111E-08	
55		3.962E-08	3.962E-08	
56		8.905E-09	8.905E-09	
57		1.781E-09	1.781E-09	
58		3.174E-06	3.174E-06	
59		1.347E-06	1.347E-06	
60		8.653E-07	8.653E-07	
61		8.653E-07	8.653E-07	
62		8.653E-07	8.653E-07	
63				
64				
65		3.958E-07	3.958E-07	
66		7.916E-09	7.916E-09	
67		3.958E-08	3.958E-08	
68		3.958E-08	3.958E-08	
69		7.916E-08	7.916E-08	
70		1.583E-08	1.583E-08	
71		7.916E-09	7.916E-09	
72		7.916E-08	7.916E-08	
73		7.916E-08	7.916E-08	
74		7.916E-09	7.916E-09	

Table 9.5-8

Basin F Emissions
(continued)

	J	K
1	Normalized Emission	Normalized DE
2	Rate (tons / yr)	(%)
3		
4	5.554E-14	100.0000
5	3.436E-12	100.0000
6	1.408E-12	100.0000
7	1.101E-14	100.0000
8	6.657E-14	100.0000
9	2.634E-10	99.9974
10	5.447E-12	99.9998
11	1.710E-13	100.0000
12	8.331E-13	100.0000
13	1.598E-10	99.9987
14	4.717E-14	100.0000
15	2.910E-14	100.0000
16	5.623E-12	100.0000
17	1.670E-10	99.9900
18	1.041E-11	100.0000
19	2.661E-11	99.9999
20	2.092E-14	100.0000
21	9.383E-11	99.9991
22	1.511E-11	99.9992
23	1.828E-09	99.9999
24	2.092E-14	100.0000
25	7.019E-15	100.0000
26	3.423E-12	99.9997
27	2.359E-16	100.0000
28	8.098E-14	100.0000
29	8.101E-11	99.9951
30	3.728E-16	100.0000
31	1.555E-10	99.9775
32	1.472E-15	100.0000
33	4.147E-15	100.0000
34	5.839E-10	100.0000
35	1.849E-10	100.0000
36	7.304E-10	100.0000
37	1.879E-13	100.0000
38	9.339E-17	100.0000
39	1.716E-16	100.0000
40	7.970E-17	100.0000
41	3.076E-11	99.9891

Table 9.5-8

Basin F Emissions
(continued)

	J	K
42		
43		
44	9.605E-12	
45	2.568E-12	
46	4.536E-11	
47	1.851E-11	
48	9.072E-12	
49	4.603E-12	
50	1.941E-12	
51	7.564E-10	
52	4.776E-13	
53	2.406E-14	
54	1.543E-10	
55	7.537E-11	
56	1.694E-11	
57	3.388E-12	
58	6.038E-09	
59	2.561E-09	
60	1.646E-09	
61	1.646E-09	
62	1.646E-09	
63		
64		
65	7.528E-10	
66	1.506E-11	
67	7.528E-11	
68	7.528E-11	
69	1.506E-10	
70	3.011E-11	
71	1.506E-11	
72	1.506E-10	
73	1.506E-10	
74	1.506E-11	

Table 9.5-8

**Basin F Emissions
(continued)**

Footnotes to table - Estimate of Organic Emissions

- B,C. Compounds and feed rate furnished by R.F. Weston
- D. Based on actual laboratory generated experimental thermal decomposition data or extrapolated based on theory. DE (Thermal) is the destruction efficiency at 900 C achieved under laboratory non-flame conditions in a pyrolytic atmosphere
- E. Based on the assumption that 99% of each POHC passes through the flame and is completely destroyed. The DE of the remaining 1% which is destroyed in the post-flame zone is assumed to be equal to DE (Thermal)
Theoretical DE at 900C= $99.0000 + 0.01 * DE(Thermal)$
- F. Emission Rate of POHC=Feed Rate*(1-Theoretical DE at 900C/100)
- G. Emission Rate as PIC is based on the data included in the PIC estimate tables. The formation of each POHC as a PIC from every other POHC has been estimated. Also the contribution to PIC formation of poorly characterized reactions involving the waste feed as a whole have been included. Emission rates of other PICs have also been included at the bottom of the table.
- H. Emission Rate as POHC and PIC= Emission Rate POHC+Emission Rate PIC
- I. Effective Theoretical DE of POHC= $100 * (1 - \text{Emission Rate as POHC and PIC} / \text{Feed Rate})$
- J. Assumes that the incinerator achieves 99.99% DRE for tetrachloroethene which is a likely POHC selection. Phenol and phenanthrene had a slightly lower predicted relative DREs due to their very low feed rate and propensity for PIC formation. However, these compounds would not be recommended for POHC trial burn selection because of their possible formation as a PIC from fuel combustion and other poorly characterized sources in the waste feed. Furthermore selection of tetrachloroethene (as opposed to phenol or phenanthrene) which has a higher un-normalized DE, results in a higher predicted emission rate for all the compounds after normalization. Thus selection of tetrachloroethene as the POHC for normalization represents a conservative, worst case approach to the risk assessment.
Normalized Emission Rate=Emission as POHC and PIC*($0.0001 / 0.052574$)
- K. Normalized DE= $100 * (1 - \text{Normalized Emission Rate as POHC and PIC} / \text{Feed Rate})$

#	Parent POHC	Feed Rate (tons/yr)	L	I	V	n
1	1,1-Dichloroethane	2.92E-05	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Dichloroethane	Acetone
2	1,1-Dichloroethene	1.56E-05				
3	1,2-Dichloroethane	9.11E-06				
4	1,2-Dichloropropane	5.79E-06				
5	Acetone	3.50E-05				
6	Benzene	1.02E-05				
7	Chlorobenzene	2.45E-06				
8	Chloroethane	8.99E-05				
9	Chloroform	4.38E-04	2.000E-04			
10	Chloromethane	1.21E-05				
11	Dimethyl Sulfide	2.48E-05				
12	Methyl Ethyl Ketone	1.53E-05				
13	Methylene Chloride	7.31E-04	1.000E-04	1.000E-04		
14	Tetrachloroethene	1.67E-06	1.000E-04			
15	Toluene	2.66E-05				
16	Trichloroethene	1.78E-05	1.000E-03			
17	Vinyl Acetate	1.10E-05				
18	Vinyl Chloride	1.02E-05				
19	p-Xylene (Total)	1.90E-06				
20	Aniline	1.78E-03				
21	Atrazine	1.10E-05				
22	Benothiazole	3.69E-06				
23	4-Chloroaniline	1.02E-06				
24	Malathion	1.24E-07				
25	4-Methylphenol	1.39E-05				
26	Naphthalene	1.64E-06				
27	Parathion	1.96E-07	1.000E-03			
28	Phenol	6.92E-07				
29	Yapona	7.74E-07				
30	bis (2-Ethylhexyl) phthalate	2.18E-06				
31	Hydrazine	3.07E-01				
32	Monomethylhydrazine	9.72E-02				
33	Unsymmetrical dimethyl hydrazine	3.84E-01				
34	n-Nitrosodimethylamine	9.68E-05				
35	Aldrin	4.91E-08	1.000E-03			
36	Dieldrin	9.02E-08	2.000E-03			
37	Lindane	4.19E-08				
38	Phenanthrene	2.83E-07				
39	Total Organic Feed Rate	7.92E-01				
40	Total PIC Emission Rate (t/yr) =	0.000E+00	1.791E-09	7.310E-10	0.000E+00	0.000E+00

Sr.	Parent POHC	Feed Rate (tons/yr)	L	I	U	n
1						
2						
3			1,1-Dichloroe	1,2-Dichloroe	1,2-Dichloroe	Acetone
4	1,1-Dichloroethane	2.92E-05				
5	1,1-Dichloroethene	1.56E-05				
6	1,2-Dichloroethane	9.11E-06				
7	1,2-Dichloropropane	5.79E-06				
8	Acetone	3.50E-05				
9	Benzene	1.02E-05				
10	Chlorobenzene	2.45E-06				
11	Chloroethane	8.99E-05				
12	Chloroform	4.38E-04	2.000E-04			
13	Chloromethane	1.21E-05				
14	Dimethyl Sulfide	2.48E-05				
15	Methyl Ethyl Ketone	1.53E-05				
16	Methylene Chloride	7.31E-04	1.000E-04	1.000E-04		
17	Tetrachloroethene	1.67E-06	1.000E-04			
18	Toluene	2.66E-05				
19	Trichloroethene	1.78E-05	1.000E-03			
20	Vinyl Acetate	1.10E-05				
21	Vinyl Chloride	1.02E-05				
22	o,p-Xylene (Total)	1.90E-06				
23	Aniline	1.78E-03				
24	Atrazine	1.10E-05				
25	Benzothiazole	3.69E-06				
26	4-Chloroaniline	1.02E-06				
27	Malathion	1.24E-07				
28	4-Methylphenol	1.39E-05				
29	Naphthalene	1.64E-06				
30	Parathion	1.96E-07	1.000E-03			
31	Phenol	6.92E-07				
32	Yapona	7.74E-07				
33	bis (2-Ethylhexyl) phthalate	2.18E-06				
34	Hydrazine	3.07E-01				
35	Monomethyldiazine	9.72E-02				
36	Unsymmetrical dimethyl hydrazine	3.84E-01				
37	n-Nitrosodimethylamine	9.88E-05				
38	Aldrin	4.91E-08	1.000E-03			
39	Dieldrin	9.02E-08	2.000E-03			
40	Lindane	4.19E-08				
41	Phenanthrene	2.83E-07				
42	Total Organic Feed Rate	7.92E-01				
43	Total PIC Emission Rate (t/yr) =		0.000E+00	1.791E-09	7.310E-10	0.000E+00

	Y	Z	AA	AB	AC	AD	AE	AF
1				PIC Yield (%)				
2								
3	Benothiazole	4-Chloroaniline	Malathion	4-Methylphenol	Naphthalene	Parathion	Phenol	Vapona
4								
5								
6								
7								
8								
9					1.000E-03		1.000E-03	
10					5.000E-03		4.000E-03	
11								
12								
13								
14								
15								
16								
17								
18				1.000E-04	5.000E-04		2.000E-03	
19								
20								
21					2.000E-04			
22					2.000E-04		1.000E-03	
23		1.000E-04					1.000E-04	
24								
25								
26								
27								
28							5.000E-04	
29								
30							5.000E-03	
31				3.000E-04	1.000E-03			
32								
33								
34								
35								
36								
37								
38							1.000E-04	
39							1.000E-04	
40								
41								
42					5.000E-04			

NO	HT	HL	PK	HL	HT	AN
1						
2						
3	bis (2-Ethylhe	Monomethylid	Unsymmetrical	n-Nitrosodime	Aldrin	Lindane
4	Hydrazine					
5						
6						
7						
8						
9						
10						
11						
12						
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35						
36						
37						
38						
39						
40						
41						
42						
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

	A0	AP	AQ	AR	AS	AT	AU
1							
2							
3	Phenanthrene		Carbon Tetrach	YIELD OF PICS WITH SPECIFIC PRECURSORS (%)			
4				1,2 Dichloroethene	Hexachlorobenzene	Pentachlorobenzene	Tetrachlorobenzene
5							
6							
7							
8							
9							
10							
11							
12			1.000E-03	1.000E-04	5.000E-03	2.000E-03	1.000E-03
13							
14							
15							
16			1.000E-04	1.000E-04			
17			5.000E-04	1.000E-04	1.000E-02	5.000E-03	2.000E-03
18							
19			2.000E-04	1.000E-03	1.000E-02	5.000E-03	2.000E-03
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38				1.000E-03	1.000E-03	1.000E-04	
39				1.000E-03	1.000E-03	1.000E-04	
40							
41							
42	2.000E-05						

	BC	BD	BE	BF	BG	BH	BI	BJ
1								
2			YIELD OF PICS WITH SPECIFIC PRECURSORS (X)					
3	Quinoline	Carbazole	Acetonitrile	Acrylonitrile	Benzonitrile	Naphthalene	Cs Pyridine	
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23	5.000E-04	1.000E-04						
24								
25								
26	5.000E-04	1.000E-04						
27								
28								
29								
30								
31								
32								
33								
34								
35			5.000E-04	2.000E-04	1.000E-04	1.000E-04	1.000E-04	
36			7.000E-04	3.000E-04	2.000E-04	2.000E-04	2.000E-04	
37			5.000E-04	2.000E-04	1.000E-04	1.000E-04	1.000E-04	
38								
39								
40								
41								
42								

		YIELD OF PICS WITHOUT SPECIFIC PRECURSORS(%)					
		Dibenzofuran	Acenaphthalene	Fluoranthene	Pyrene	Fluorene	Benzo-[a]-pyr
1							
2							
3	Benzofuran						
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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36							
37							
38							
39							
40							
41							
42	5.000E-05	1.000E-06	5.000E-06	1.000E-06	2.000E-05	1.000E-06	1.000E-05
43	3.958E-07	7.916E-09	3.958E-08	3.958E-08	7.916E-08	7.916E-09	7.916E-08

	BS	BT	BU	BY	BW	BX	BY	BZ
1								
2								
3								
4								
5								
6								
7								
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28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42	1.000E-05	1.000E-06						